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Revised Fares Scheme with the Minister

AN announcement is to be made soon regarding the proposals for modification of certain fare increases submitted to the Minister of Transport by the British Transport Commission. Higher road and rail fares came into force in the London area on March 2, and were to have taken effect in the provinces on May 1 had it not been for the standstill order issued by the then Minister of Transport, Mr. J. S. Maclay, on April 15. The result of this was that increases in certain season ticket rates and workmen's fares were suspended outside London, and since that time the dissatisfaction expressed by London travellers has been increased by the fact that they have been subject to the higher charges while those in the provinces have continued to pay the previous rates. Answering questions in the House of Commons this week, Mr. Lennox-Boyd, Minister of Transport and of Civil Aviation, said that in the eleven weeks since March 2 the fare increases in the London area had brought in an additional revenue of about £2,500,000. This is at the rate of some £11,800,000 a year, whereas the yield originally estimated from the scheme was another £13,600,000. It appears that many travellers who are able to make economies in their daily fares are doing so, but such possibilities are mainly open to users of road services. It is less practicable for the traveller with a season ticket to shorten his journey by alighting a station earlier than usual, than for the user of buses to curtail his ride by the frequently short distance that takes him past a fare stage. The exasperation of season ticket holders has been increased by various statements to the effect that some of them have been under-charged in the past. It was, then, among a regular and numerous class of travellers that goodwill was in danger of being lost, and it is doubtful if they would have been particularly receptive to the softening-up process of explanations about the necessity and incidence of fare increases which the B.T.C. was criticised for not undertaking. If he gains relief in any adjustments the B.T.C. may have recommended to the Minister, the season ticket holder and his family may be more inclined than he often feels at present to patronise railway services outside his accustomed orbit.

Effects of the Steel Shortage

WITH the publication of the summer timetables each year there is a tendency among the public to make unfavourable comparisons with the facilities of the immediate pre-war period. Shortage of steel is responsible for delay in regaining previous standards of speed and comfort, for the priorities which have to be followed in making use of available supplies are not those which produce the most spectacular results. The May issue of the *British Railways Magazine* recalls the fundamental importance of permanent way maintenance. Nearly £127 million has been spent in this direction since the beginning of 1948 and results are now being seen in the shape of fewer speed restrictions. Steel for rolling stock maintenance cannot be cut, so that new construction has to be slowed down. Here, too, there must be priorities, freight vehicles ranking first, although only about 65 per cent. of the wagon-building programme in railway workshops can be carried out. Only 50 per cent. of the locomotives needed can be built, so that replacement of the older classes will be slowed down. As reported already, no passenger coaches of the 1952 programme can be constructed, although some building is carried forward.

Indian Railways 1953-54 Rolling Stock Imports

THE Indian Railway Board's provisional rolling stock programme for 1953-54 provides for the purchase overseas of some 125 steam and diesel locomotives, 130 boilers, 200 carriages, 550 carriage underframes, 3,860 wagons, and many other items, such as wheels and axles and travelling cranes. Compared with the proposed broad-gauge rolling stock imports for 1952-53, referred to in our July 6, 1951, issue, when 112 boilers and seven electric locomotives were called for, the new broad-gauge programme calls for 100 "WG," "WT," and diesel shunting locomotives, and 121 boilers. On the metre-gauge lines diesel engine and steam locomotive boiler requirements will be about the same as in the previous year and though less coaching stock is being tendered for, some 3,650 wagons are contemplated instead of a maximum of 2,100 in 1952-53. Narrow-gauge requirements, which include 15 locomotives and over 100 wagons, are also above those for the previous year. As in previous years, the Railway Board has pointed out that its proposed programme of rolling stock purchases from abroad is subject to a number of safeguards, and the greatest importance is being attached to delivery dates.

S.R. Debating Society Visits Belgium

MEMBERS of the British Railways, Southern Region, Lecture & Debating Society returned on May 11 from a nine-day tour of Belgium, the fifth successive annual Continental visit which the Society has made. Previous visits covered France, Switzerland, and Italy. Mr. K. W. B. Davies, Honorary Secretary of the Society, once again produced for the occasion an excellent programme, embellished by the penmanship of Mr. S. W. Weaver and with a foreword by Mr. C. P. Hopkins, Chief Regional Officer, Southern Region, and President of the Society. In his message Mr. Hopkins expressed pleasure that the present economic difficulties and foreign currency restrictions had not deterred the Society from undertaking the tour, which

would widen the transport experience of members. The programme was much more than a mere itinerary for Mr. Davies included notes on the history and topography of Belgium, a wealth of detail concerning the National and Vicinal railway systems, with particular reference to Brussels, much information on the port of Antwerp, and a review of Anglo-Belgian packet services.

Advancement of Electrical Engineering

TODAY there are widening opportunities for electric traction equipment to contribute to the growing totals of export orders placed with the electrical manufacturing industry. The British Electrical and Allied Manufacturers' Association (B.E.A.M.A.), owing its origin to the formation of the National Electrical Manufacturers' Association fifty years ago, has since its early years paid special attention to export matters and the industry's overseas relations. Its report for 1951-52 summarises the association's various activities in this respect, which have been supported since 1949 by the issue of the "B.E.A.M.A. Catalogue." A new edition due to appear this autumn will include a classified buyers' guide in four foreign languages; 15,000 copies are to be despatched free to overseas recipients selected by member-firms or their representatives. Useful work was done during the year in presenting British viewpoints at meetings of the International Electrotechnical Commission, which included one on electric traction equipment. A Traffic Committee maintains liaison with transport undertakings to facilitate the despatch of bulky electrical machinery from works to ports by road and rail. Members of the association's Converting Plant Committee are collaborating with the Railway Executive in the programme for standardisation of frequency in the Southern Region, ensuring the co-ordination necessary to ensure a smooth changeover and continuity of transport facilities for the public.

More Camping Coaches this Summer

PRESSURE on hotel and boarding house accommodation has turned the thoughts of many families to renting bungalows and cottages. An alternative for those who do not mind catering for themselves on holiday is the railway camping coach, this year to be available in greater numbers than at any time since the war. Two specimen vehicles from the Western and Eastern Regions were exhibited at Marylebone on May 15, as reported elsewhere this week. Both provide attractive living quarters and very practical facilities for housework. No member of the party need hang back at washing-up time for fear that his presence will cause congestion in the roomy kitchen. Various minor differences in appointments, such as the use of oil or Calor gas for cooking, show that the Regions retain full individuality in their approach to the important affairs of living and eating. Occupants of the Eastern Region coach will find a washbasin in each two-berth cabin. In the Western Region vehicle a single washbasin at one end may lead to some salutary trials of the virtue of patience, and emphasise to late risers that there are practical as well as picturesque advantages in the association of shady nooks with babbling brooks.

The Huntingdon Train Fire

COLONEL R. J. WALKER'S report, issued last week, on the fire on July 14, 1951, in the "West Riding" express near Huntingdon is of very serious importance. Four coaches were totally destroyed and 22 passengers and the guard burnt or otherwise injured. This is the third case in just over two years. Colonel Walker himself inquired into the one at Penmanshiel in June, 1949, and the other at Beattock in June, 1950, when 5 lives were lost. His reports contained recommendations for reducing fire risk, fighting an outbreak effectively, and facilitating escape in emergency. Most of these were accepted by the Railway Executive, but others declined, as he thinks, with insufficient reason. He now pleads, very rightly we feel, for the whole problem to be approached with a "new outlook" and "unreservedly and squarely faced." Emphasis has been given to this, since he completed his report, by an outbreak on March 14 this year, in which, despite good use of facilities for fighting the flames, a coach was practically burnt out, and one moreover passed as "safe" but found to have been decorated with dangerously inflammable material. We agree with Colonel Walker that fire stands in a different category from other accident risks. The public has every right to expect that the gravest consideration shall be given to his recommendations.

Progress of Railway Fire Precautions

SINCE the accidents at Penmanshiel and Beattock mentioned in the previous note, British Railways have spent some £450,000 within the past two years in carrying out the fire precaution recommendations of the inspecting officers, and arrangements have been made to ensure that train staffs have the knowledge and training necessary to handle emergencies. An additional side door has been fitted to all 26 coaches of the non-standard type involved at Huntingdon, and they have been equipped with more fire extinguishers and alarm signals among other extensive alterations to minimise fire risk. Of the coaches mentioned in the Huntingdon report as having inflammable surfaces, 7,400 have now been dealt with, 1,400 are having attention, and 600 are waiting to be tested. Certain coaches were built with an inflammable cloth covering on the walls extending to floor level. Fireproof skirtings have already been fitted in compartments and corridors of 260 of these vehicles, which number 1,220. These figures show the efforts made already in carrying out precautionary measures. Progress is governed by available finance and some recommendations prove unexpectedly expensive to implement. Provision of central doors, for example, involved £60 per coach against the outlay of £5 to £10 per door suggested in the Huntingdon report.

Gas-Turbine Locomotive Trials

LITTLE can yet be estimated as to the fuel consumption, thermal efficiency and detailed traction performance of gas-turbine locomotives. Therefore four days of dynamometer car testing were undertaken recently on revenue trains between Paddington and Plymouth with the Brown Boveri locomotive No. 18000 of the Western Region of British Railways with trains of 360/400 tons. The trials were directed specially towards thermal and fuel performance and correlating any such values to traffic requirements, not to finding the maximum train weights that could be hauled up any given gradient at a given speed. Therefore the report just issued by British Railways and summarised elsewhere in this issue does not include charts of continuous d.b.h.p. or d.b. pull plotted against speed and gradient profile. The designed gas temperature is 1,100° F. at full load, but with maximum output attained during the tests of 1,500 kW. at the generator output, or, say, 2,200 h.p. at the generator input, this temperature was scarcely reached, so that obviously blade life should be long and fuel consumption high. At the maximum output thermal efficiency is at its best; even so it is disappointingly low, corresponding only to about 12½ per cent. at the generator output and to not more than 11 to 11½ per cent. at the drawbar. On the strictly motive-power side it is illuminating that "power on" was needed only for 182 to 190 miles out of the 225, a proportion which presumably can apply to steam locomotives also.

British Railways Standard Tank Engine

THE first of 20 tank engines of a new design for British Railways has been completed at the Swindon works of the Western Region and is described and illustrated elsewhere in this issue. The locomotive, No. 82000, is a class "3" tank engine, with 2-6-2 wheel arrangement, and is the smaller of the two tank engine classes under construction. The locomotives are designed for short-distance working and in common with previous British Railways standard engines will have almost universal

availability over main and secondary lines. A feature of the design is the degree of standardisation which has been achieved with other standard locomotives; these parts include boiler securing, spring gear arrangements and the method of staying the axlebox guides. The valve gear is somewhat similar to that used on the class "4" tank engines, described and illustrated in our August 3, 1951, issue, while the leading pony truck is similar in all respects. The method of transmitting the load to the axleboxes and side control are also similar. The weight in working order of the new tank engine is 12 tons 12 cwt. lighter than the class "4" tank. Other features following closely the previous standard engines include rocking grate and ashpan control, cab layout, lubrication and sanding equipment.

Little Light from the Lords

THE White Paper on Transport gave the House of Lords little scope last week for a debate of the constructive value usually expected from that quarter. Lord Leathers, Secretary of State for the Co-ordination of Transport, Fuel & Power, did not fill out the fundamentals of the Government's plans for transport organisation already made known beyond an allusion to "working arrangements between road and rail," of which the levy on road transport would be only one example. Criticism of the White Paper proposals was heard from Government supporters as well as from the Opposition, and Lord Hailsham saw in the measures proposed for denationalising road transport a doctrinaire approach to the question of public *versus* private ownership that invited retaliation. Similar misgivings led Lord Beveridge to plead for transport to be taken out of politics for a while and made the subject of a small Royal Commission. Neither speaker can have been reassured about the future by Mr. Herbert Morrison's first reaction to the White Paper, expressed in the course of his request for a debate on the subject in the House of Commons at the earliest possible moment.

Lord Leathers, whose speech is reported elsewhere, had more to say about the procedure for restoring road transport to private hands than on the future relations between road and rail considered as essential services to the nation. He said the Government regarded the levy on road transport as the keystone of its policy. He expressed confidence that railwaymen would make every effort to avoid having to use the levy to offset loss of traffic to the roads, but there is a likely source of contention in deciding the point at which the railways have made all the economies possible and qualify for financial assistance. Disputes of this kind would not provide the atmosphere required for the growth of healthy competition between rail and road to which the Government attaches importance. On the future organisation of the railways, Lord Leathers said he envisaged area railway boards responsible to a central body in such matters as finance and charges. Areas would have a greater measure of independence than the present Regions. The Government proposed a speedier system to enable the railways to adjust their charges to meet increased costs, and also to free them from certain restrictions fettering their right to lower charges. This last proposal was also referred to in a speech by Lord Swinton at the weekend when he said that the Government meant to give the railways the chance of quoting special terms for special business. Freedom in this respect has long been sought by the railways and would be essential to fair competition with a denationalised road industry.

The Lords debate has been followed this week by a debate in the Commons which took place on May 21 as we closed for press. Further clarification may emerge in these exchanges of the details of the Government's plans but they will not remove the unfortunate impressions of haste and absence of clearly defined intentions created by the White Paper. By producing a document with all the appearance of a hasty political gesture and little evidence of expert study of the intricate problems involved, the temptation is held out to others to take ill-considered action in this vital field when the opportunity is presented.

Summer Train Services, London Midland Region

PRINCIPAL improvements in the London Midland summer train services, operative from June 30, are to be found on the Midland and Central Divisions. In particular, Sheffield and Nottingham will benefit by faster services to and from St. Pancras. The 2 p.m. down will reach Nottingham 10 min. earlier (123·5 miles non-stop in 137 min.), and Sheffield 14 min. earlier, at 5.39 p.m. The 3.15 p.m. down will run the 72 miles to Kettering in 79 min., and reach Nottingham 7 min. and Sheffield 5 min. earlier; the 4.50 p.m. will cover the 65 miles to Wellingborough in 71 min., and reach Nottingham 7 min. and Sheffield 8 min. earlier. The gains of these three trains to Leeds and Bradford will be 17, 7, and 10 min. respectively. Another down express accelerated is the 10.15 a.m. from St. Pancras, to arrive at Leicester in 108 min., and to reach Derby 10 min. and Manchester 11 min. earlier.

In the up direction the 7.45 a.m. from Derby to St. Pancras is to be accelerated, running non-stop from Nottingham in 136 min. The 7.55 a.m. semi-fast from Derby to Kettering, hitherto connecting at Kettering with the 7.5 a.m. from Sheffield to St. Pancras, will run through in advance of the latter, non-stop from Kettering, arriving at 10.54 a.m., 29 min. earlier. The 7.15 a.m. from Manchester will be speeded up by 14 min. between Derby and London, coming up from Leicester in 111 min. with a 3-min. Luton stop (equivalent to 105 min. non-stop); and the 7.5 a.m. from Bradford will leave 5 min. later and reach St. Pancras 10 min. earlier, giving a 3½-hr. service from Sheffield to London. Both this train and that last mentioned will be allowed 76 min. for the 68·9 miles from Leicester to Luton, and 32 min. for the 30·2 miles thence to St. Pancras. Also the 10.39 a.m. from Leeds will leave 6 min. later and reach London 8 min. earlier, at 3.42 p.m., running up from Kettering, 72 miles, in 77 min.

On the Central Division a substantial step is being taken towards providing an even-interval express service between Leeds, Bradford, and Manchester by the old Lancashire & Yorkshire route, and several useful accelerations are being made at the same time. Departure times are at 5 min. before the hour from Leeds and 15 min. after from Bradford; the Leeds and Bradford portions are joined as usual at Halifax. Departures from Leeds and Bradford (with accelerations in minutes shown in brackets), are respectively at 7.55 and 8.15 a.m. (no change in times); 8.55 (15) and 9.15 (10) a.m.; 10.55 and 11.15 (18) a.m.; 12.55 (3) and 1.15 (17) p.m.; 1.55 and 2.15 (15) p.m.; and 3.55 (6) and 4.15 (18) p.m. Bradford is given the preference, by the Bradford trains being the second to arrive at Halifax in each case, as the Leeds-Manchester passengers have also the use of the express trains *via* Huddersfield; in two cases the Bradford-Manchester times are cut to as little as 70 min. All the trains arrive at Liverpool Exchange from 53 to 57 min. after the Manchester arrivals.

In the reverse direction, departures are at the even half hours from Liverpool, and 55 min. later from Manchester, but the accelerations are fewer. To Bradford the accelerations are, 8.30 a.m. from Liverpool (8 min.); 11.30 a.m. (19 min.); 12.30 p.m. (5 min.); 2.30 p.m. (23 min.); 3.30 p.m. (5 min.); and 4.30 p.m. (5 min.); in this direction also the through Bradford portions are marshalled in front and given the preference in the departures from Halifax or Low Moor, according to where the trains are divided. The result is to give the best communications throughout the day with Manchester and Liverpool that Bradford has yet had. It is curious that no attempt is made to provide buffet refreshments on at least the more popular of these services; at one time the Lancashire & Yorkshire Railway ran four restaurant car services daily between Manchester and Leeds with a single restaurant car set that began and finished its daily journeys at Fleetwood or Heysham.

On the Western Division the only acceleration is one of 8 min. of the northbound "Midday Scot" between Crewe and Carlisle, which, coupled with 2 min. north of Carlisle, brings the train into Glasgow Central at 9.35 p.m., 10 min. earlier. The "Royal Scot" will continue to require 8 hr. between Euston and Glasgow, with one stop only, for

changing engines, outside Carlisle, and therefore will still be 60 min. slower than its pre-war 7 hr., whereas the "Capitals Limited" is to be brought down to 7 hr. 6 min. northbound and 7 hr. 7 min. southbound (also 7 hr. pre-war) over a distance only nine miles shorter between Kings Cross and Edinburgh than that between Euston and Glasgow. The "Manxman" (10.30 a.m. from Euston to Liverpool non-stop) reappears in the timetable, and also the 11.10 a.m. from Liverpool to Euston. The 8.35 a.m. from Manchester to Euston is to start at 8.20 a.m., be slowed 13 min. in running to Rugby, and to arrive in Euston at 12.55 p.m., a net loss of 6 min.; to get ahead of this train the 9.55 a.m. from Wolverhampton (the "Midlander") is to be started 10 min. earlier, and to leave Birmingham at 10.20 a.m. (so interrupting the sequence of even-time express departures at 30 min. past the hour), reaching Euston at 12.45 instead of 12.57 p.m.

The name "Northern Irishman" is conferred on the boat trains between Euston and Stranraer Harbour (7.55 p.m. from Euston and 10 p.m. from Stranraer). No distinction is made in the new London Midland Region timetable between full restaurant car and buffet car services; all are indicated equally by the letters "R.C." in the train columns, and are described throughout as "refreshment cars," an interesting development in democratisation from the exclusive "Dining Saloon" of bygone days.

Recent Indian Railway Developments

IN view of the completion of railway grouping in India—recorded in our columns last week—and the centenary next year of the opening to traffic of the first line in the country—from Bombay to Thana—it is appropriate that the development of the Indian railway system should now be examined. The Ministry of Railways (Railway Board) has sent us a copy of the White Paper on Indian Railways, presented to the Indian Parliament in February last, part of which is a review of their progress through a century.

The pre-1939 history of the railways outlined in this review needs no comment, except that we cannot agree with some of the implications. Explaining the subsequent difficult situation, it reminds one that during the first phase of the war, 8 per cent. of the metre gauge locomotives and 15 per cent. of the wagons of that gauge, 4,000 miles of track, and 4,000,000 sleepers had been released from Indian lines for military purposes, entailing the dismantling of 26 branch lines. In the second phase, with Japan in occupation of Burma and attacking Assam, equipment of this gauge was required with particular urgency, and the strain imposed on Indian railways as a whole was almost unbearable. Moreover, the use of railway workshops and plant for making military equipment made it impossible to reduce the accumulated arrears of renewals and replacements.

This state of affairs had hardly begun to improve when the Partition of 1947 struck another blow at progress towards normal. The Eastern Punjab and Assam Railways were left without repair facilities, as the workshops previously serving those areas passed into Pakistani hands. Though many new locomotives and wagons have since been placed in service, the situation on April 1, 1951, was that—based on an economic life of 40 years—1,640 locomotives and 25,000 wagons were still due for replacement. Meanwhile traffic was continuing to develop rapidly, as the table below shows:—

—	1938-39	1949-50	1950-51
Passengers carried (millions) ...	372	1,081	1,129
Freight tons carried (millions) ...	86	105	108
Passenger-miles (millions) ...	12,589	32,844	34,099
Freight ton-miles (millions) ...	17,047	28,144	24,489

In 1949, however, the Legislature set up a Convention Committee to (1) examine the relations between general and railway finances, (2) assist in the solution of rehabilitation problems and reorganisation, and (3) facilitate a reorientation of railway policy. The committee's recommendations, accepted by Parliament in December of that year, included clauses that (*a*) the separation of railway and general finance be continued, but the present relationship should be altered to give the taxpayer the status of sole shareholder in the railway undertaking entitled to a guaranteed dividend of 4 per cent. on loan capital; (*b*) contribution to the Depreciation Reserve should be a minimum of Rs. 15 crores annually; (*c*) additional minor expenditure should be chargeable to revenue instead of to capital, and (*d*) for expenditure on such items as the construction of developmental new lines, passenger amenities, and enhanced labour welfare, a Railway Development Fund should be established.

These measures not only assure central revenues of a fixed dividend, but also facilitate both forward economic planning in the civil field and the building up of railway reserves; moreover, they assist in carrying out a comprehensive programme of rehabilitation and expansion. The Development Fund enables backward areas to be developed by expanding rail facilities unhampered by considerations of return on outlay. Capital construction is now financed by both loans provided by general revenues and from railway revenues accumulated in the Development Fund.

Under this new dispensation, increased allotments for rehabilitation could be made, as the programme tabulated below shows.

REHABILITATION PROGRAMME (IN THOUSANDS OF RUPEES)

—	1949-50 Actual	1950-51 Actual	1951-52 Revised Est.	1952-53 Budget Est.
Rolling stock and machinery	21,75,29	20,16,17	42,14,20	42,55,03
Permanent way	9,53,53	11,43,53	10,03,28	14,52,52

Meanwhile, development and reorganisation were expedited in consequence; some of the principal results were the inauguration of the locomotive building works at Chittaranjan, the completion of the Assam Rail Link, the regrouping of the railway administrations, and the progress already made with the Deesa-Kandla metre-gauge construction to the new port at the latter place—to offset the loss of Karachi to Pakistan—as the port for Rajastan (Rajputana) and North Western India generally. With these financial and administrative reforms a rationalisation of rate and fare charges was introduced in 1948. Economy in operation is also being studied by committees. A new college for the training of officers was opened at Baroda on January 31, 1952. Provision also is made in the 1952-53 budget for a Railway Research & Testing Centre at Lucknow.

Economic Aspects of Nationalisation

SINCE the British Overseas Airways Corporation was set up in 1939, a number of other public corporations has been established to conduct nationalised industries. The acts constituting these bodies define their duties in general terms, leaving them fairly free to devise ways and means of conducting the business which they control. The Transport Act, 1947, was singular in setting up a Commission and Executives to act as its agents in operating different types of transport. Inevitably such changes in the structure of industry raise some fresh economic problems. These form the subject of a treatise * written by Mr. A. M. de Neuman, Ph.D., who has done a useful service in assembling the facts about important corporations which are estimated to employ over 2 million people and had in 1949 gross incomes of £1,372 million—a sum equal to 12½ per cent. of the national income.

In a section of his essay headed "Bureaucracy," Mr. de Neuman expresses distrust of the ability of public corporations to carry on effectively without more precise directives than Parliament has given. He thinks that the supply of administrative talent is limited, so that the work is not done

* "The Economic Aspects of Nationalisation in Great Britain." Obtainable from Students' Bookshops Limited, 4, Trumpington Street, Cambridge. Price 8s. 6d.

on commercial principles and people with civil service traditions are winning the day everywhere. We are told that "the passion for unification, standardisation, co-ordination, in many cases encouraged by the law, as well as the rule of precedent, are establishing themselves everywhere, be it transport charges, passengers' fares, charges for gas or electrical fittings, or internal relations of the corporations." The obvious comment on these opinions is that the corporations came into being to unify public utilities and to improve co-ordination wherever possible.

The success attending the recent reorganisation of B.O.A.C. activities is sufficient to refute a further statement that "nothing is more distant from the minds and actions of the boards than a commercial outlook." When dealing with the duty of public bodies to make ends meet, Mr. de Neuman takes a narrow view of their responsibilities and would have them "adhere grimly to the principle of pricing on the basis of costs." He girds at the British Transport Commission for proposing to develop road, rail and water services according to their capabilities and efficiency, instead of solely on the principle of the lowest cost of performing the work. Obviously the Commission is bound to take a comprehensive survey of the transport needs in each area of the country. In another passage the author admits that the choice of transport facilities has been much criticised by the public as being too limited. The policy which he advocates would leave traders no choice at all in many instances. Early in his essay Mr. de Neuman says that he accepts nationalisation as a fact, but he has raised more criticisms on the machinery for managing public utilities than can be discussed adequately in a pamphlet of 52 pages.

Jubilee of G.W.R. Road Services

USUALLY thé road service activities of the former Great Western Railway are associated with the company's pioneer passenger road motor venture between Helston and the Lizard. This began in 1903, but a year earlier the G.W.R. had considered the use of mechanical road transport for goods traffic, and in 1902 the late Mr. F. C. A. Coventry prepared a report on the use of steam wagons for railway cartage services. Experience in their operation had been obtained by the War Office, and Mr. Coventry visited Basingstoke on May 6, 1902 to investigate the suitability of a Thornycroft steam wagon for railway cartage use. A vehicle of this description was later put into service at Hockley, Birmingham. The present year, therefore, marks the jubilee of G.W.R. road services. At the company's meeting in 1903, the Chairman, Lord Cawdor, observed that no doubt shareholders had heard a great deal about motorcars, and announced that a road motor passenger service would be run shortly from Helston to the Lizard. This route was inaugurated on August 17, 1903, and was operated by two second-hand Milnes Daimler vehicles previously owned by Sir George Newnes; who had decided to sell them after a period of opposition from proprietors of horse vehicles in the Lynmouth district had culminated in proceedings being taken against him for exceeding the speed limit of 12 m.p.h.

The G.W.R. Helston-Lizard service became the first motor omnibus service in England to run to a regular timetable. With others of similar date, it shared the curious feature of being operated contrary to legal requirements, which demanded that a man carrying a red flag should walk ahead of vehicles weighing 3 tons and over. Manufacturers were unable to produce public service vehicles below that weight limit, but the Act left some latitude in defining the weight of the vehicle, and so the difficulty was overcome by removing certain items of equipment and painting "2 tons, 19 cwt." on the chassis. Motor buses did not appear on the London streets for nearly a year after the inauguration of the Lizard service, and the company's enterprise attracted much attention, and brought enquiries from all parts of the world.

From this modest beginning in 1903 with two vehicles, the Great Western Railway had increased its stock to 34 by the end of 1904, and this number rose progressively to 300 in 1927. In 1929 the railway linked its interests with the National Omnibus & Transport Co. Ltd., and later with the British Electric Traction Co. Ltd. On the last day of 1933 the last bus in the familiar chocolate and cream livery was handed over to the associated Southern National Omnibus Company at Weymouth. Thus ended the history of the independent Great Western Railway road passenger services, which had been so assiduously built up, despite all the shortcomings of the early motor vehicle. On the cartage side, the company had acquired a fleet of some 25 commercial vehicles by 1910. After the first world war numbers of ex-Army A.E.C. lorries were acquired and survived until the early thirties, being replaced by improved types. Increased demand for cartage services brought a need for larger-capacity vehicles, among which were Thornycroft 10-ton tipping vehicles and 12-ton Foden steam wagons. The introduction of the mechanical horse and trailer was the final stage in equipment development before nationalisation.

A Century of Rubber Springs

IT was on February 13, 1852, that George Spencer was granted his first patent, No. 13951, for improvements in springs of railway rolling stock, and from that early beginning has developed the world-wide use of rubber springs on railways. George Spencer was not the first to consider the use of rubber as a cushioning material, but he was among the first to recognise that, due to its remarkable properties, it was an ideal material for shock absorption and vibration damping. He was born in 1810 and died in 1889. All that is known of his early career is that he was with Messrs. Fox & Henderson, Consulting Engineers, London, with whom he was employed as a draughtsman.

From the earliest stage of his career he took a considerable interest in the development of rubber for various purposes, and from the granting of his first patent was a prolific inventor of devices embodying its use, and developed a considerable business with Austrian railways. From 1866 onward his business developed considerably and he began to make headway. Due to currency difficulties obtaining, his business in Austria had by then ceased to exist. Between the years 1870 and 1896, further patents were taken out, and the use of rubber springs were adopted in this country, the Argentine and India. Spencer had from his earliest stages of development, always endeavoured to prevent metal-to-metal contact between the buffing head and guide, and in 1896 the invention of the triple ring concentric spring eliminated the necessity for any stop on the column of rubber springs.

Further developments comprising various designs, relating to the arrangement of rubber springs in buffers took place, and in 1902 Alex Spencer's patent double buffer was produced, in which for the first time, provision was made for the very heavy impacts occurring during shunting operations. The bar spring intended to take advantage of the rectangular space in which concentric springs of suitable sizes could not be accommodated was invented in 1932. From his earliest developments George Spencer insisted on using only rubber of the highest quality for products, and by a process of elimination as a result of tests on products from manufacturers operating in 1852, finally selected the quality produced by Stephen Moulton.

This firm had been manufacturing rubber at Kingston Mills, Bradford-on-Avon, since October, 1848, and having made his decision, placed all his business with them, until in 1891 the Spencer and Moulton interests were amalgamated. George Spencer's three sons, all of whom served their apprenticeship with Samuel Johnson, the then Locomotive, Carriage & Wagon Superintendent, Midland Railway, Derby, joined him in his work, and on his death in 1899 assumed control of the business. Experience has amply confirmed his principles of design which have been followed by his successors through many stages of development, to the present types used on most of the world's railways.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

The White Paper and British Railways

May 13

SIR,—The White Paper on Transport Policy, after stating that railways are a national asset and must remain an essential element in transport, declares in Sections 11 and 12 that: "The present excessive centralisation of the railways must, however, be reduced by giving greater autonomy to areas which may follow the general pattern of the present Regions. Scotland will be a separate area. Areas will together continue to constitute a single entity for financial purposes and for the control of charges. The existence of these separate areas should encourage a healthy rivalry between them, and give greater scope for initiative than is possible under a single centralised administration."

The common interpretation of these intentions is that the Railway Executive in its present form will disappear, that the present Regions will be re-constituted and given greater independence than they now possess, and that the British Transport Commission will retain control over finance, charges and general policy.

Unlike the intention to denationalise road haulage (a policy which I believe most informed road or rail transport officers within the Commission's service deplore), the proposal to decentralise railway administration is comparatively non-controversial. It probably commands the support of the majority of railway officers who are not convinced that the present administrative structure is either the best that can be devised or is capable on its present basis of becoming the best. With all the respect that must be accorded to the view Sir Eustace Missenden expressed in *The Times* of April 23, I think that these railwaymen would still prefer to face and overcome a further internal administrative convulsion if by doing so they were sure that they were bringing about a more efficient organisation under which they could work more effectively.

Moreover, although the White Paper had unfortunately not been published when the debate on fare increases took place on April 28, its contents on this issue had been generally anticipated and it was noticeable that they aroused little or no controversy. Indeed, it seems possible that this was one feature of the Government proposals that Mr. Herbert Morrison, M.P., had in mind when, after remarking that he was anxious that management should be efficient and that the Transport Act of 1947 was right in general, he said "But we are ready to consider changes which experience and the public interest show to be desirable. Any Socialist who contended that merely because a Socialist Government passed a Socialist Act it was perfect and always would be perfect, would be unreasonable, and none of us should take that view."

Section 13 of the White Paper makes clear that details of railway reorganisation are not to be written into the new Bill, and for this we may be devoutly thankful. It does state, however, that the Commission will be required to submit a Scheme to the Minister of Transport for his approval.

I submit this letter to you, Sir, in the hope that you will afford railwaymen the space to debate in your columns the nature and solution of the problems inherent in such a major reorganisation. I also venture to express the hope that whoever may be charged with the duty of drafting the Scheme will not be averse to taking account of the views that may be expressed, always providing that they are constructive.

May I now discuss briefly some of the principal aspects of the problem and possible lines of treatment as they occur to me? My suggestions are not intended to be exhaustive and are advanced mainly in order to form a basis for discussion.

1.—How are the boundaries of the new Regions to be drawn? The White Paper only says that Scotland is to be separate and the new areas "may follow the general pattern of the present Regions." Will this mean the "Operating Regions" or the "Geographical Regions"? Moreover, is consideration to be given to such questions as whether there is on balance a real advantage to be gained from maintaining the separation of the Eastern and North Eastern Regions? On the latter problem I am not competent to express an opinion. On the former I would only say that the dualism attached to the "penetrating lines" system should, if possible, be ended. Those lines which have been completely and successfully transferred from one Region to another should not be disturbed again. "Penetrating lines" should be wholly allocated to the most appropriate Region, and probably operational and practical convenience should be the deciding factor. Problems caused by occasional geographical overlap are probably less hampering to efficient public service and internal administration than would be operationally isolated routes.

May I urge here that the new areas should be called Railways and not by some less dignified name, and also that we should not be afraid of reviving some of the traditional names and liveries to which so much loyalty was deservedly attached. Each Railway, while jealous of its name, reputation and independence, would still be proud to be one of British Railways.

2.—No-one will deny that many of the changes made on the railways since 1948 have been for the better and should not be lightly discarded. Much of the many achievements of the Railway Executive should be preserved. How can this best be done?

First the standardisation of design and equipment must proceed unchecked since this is a major source, actual and potential, of increasing efficiency and economy. The problem is how to maintain centralised control in a form which will provide the most effective service to the using departments in the Regions. This might perhaps be attained by forming an Engineering Division (Electrical, Mechanical, Civil, Signal, Telecommunication, etc.), forming a single unit separate from the Regions but responsible, under the Commission, to the Chief Regional Officers for the design, production, installation and works maintenance of standardised equipment. Operational maintenance of equipment should be a Regional responsibility, but some sections of the staff of the Engineering Division might act as agents of the Region for this purpose.

Secondly, there is a considerable number of diverse activities which for one reason or another will need or benefit from a measure of centralised control. Examples are:—

Technical and operational research
Operating Rules and Regulations
Legal
Accounting and Statistics
Public Relations
Wages and Salaries negotiations
Staff Training and Education
Central Purchasing

Here I suggest that an organisation somewhat analogous to the Association of American Railroads might be considered. This organisation—perhaps it could be called the Common Services Division—like the Engineering Division should be centrally controlled, but in and at the service of the Regions. The precise relationship of these two Divisions to the Commission and to the Regions would, of course, call for careful study and definition.

3.—The avowed and fundamental object of the White Paper proposals is to give to the Regions greater scope for initiative than is possible under a single centralised administration. If the arguments just developed for retention of central control in certain important directions are sound, a very real problem will be how and in which fields is the greater initiative which is so desirable to be exercised. Surely the answer must be found in the principle that

although on balance the case for standardised equipment and central control of certain common services must be accepted, this acceptance should not be extended to the doctrine of standardised administrative practice, establishment and method which now strait-jackets the Regions. Subject to the necessity, where it exists, of providing statistics that are comparable, I would submit that each Region should be free to introduce the administrative organisation and methods which best suit its traditions and operational and commercial environment. They would thus be enabled to compete freely with each other in a drive for greater operational and commercial efficiency and enterprise.

4.—The preparation of the Scheme will provide the opportunity of studying whether, in the absence of the Railway Executive in its present form, the Commission would be sufficiently strong and broadly based to remain an effective directing authority for the railways; and if not what future constitution that authority should assume, and precisely what should be its rôle and approach to its task. There is probably a case for considering how far it would be beneficial to strengthen the part-time and non-professional element and whether it would be desirable to attempt some form of regional representation from this source, perhaps in the further interests of passengers and traders.

5.—May I in conclusion urge the view that the fundamental problem in the production of the Scheme is to find a reasonably permanent administrative system for British Railways, which as well as being efficient will also no longer form a major political issue? From this it follows that the railway Trade Unions and such organisations as the Transport Officers' Guild must be satisfied that their interests and those of their members will be duly safeguarded. These bodies should, therefore, be taken into consultation during the Scheme's preparation so that they can understand and contribute to the solution of a problem of management which is of such importance to the future of our railways and railwaymen.

Yours faithfully,
G. L. NICHOLSON

39, Robin Hood Way, Kingston Vale, S.W.15

Transport under Debate

May 17

SIR,—The Transport Bill of 1946 was designed to produce the greatest common measure of monopoly in a commercial sense, but more by negative than positive means; that is, the philosophy behind it was the same as that which informed all legislation since the Railway Companies' Association Memorandum of January 26, 1932.

The consequent Salter Conference, whose fatal shadow walks by us still, elected for restriction of competition, but only that competition which fell within the category "for hire or reward." The gravest competition of all, that of the "C" licence and the private car, that of the people who could decide just how they would move their goods and their persons, remained and still remains. The Transport Bill carried cartelisation a long way forward, for it included restriction of the "C" licensee. The withdrawal from the Bill of that particular restriction effectively destroyed the purpose of the legislation, monopoly, and left behind the materials for a structure whose principal arms for the protection of monopolistic ideas have been blunted, and the most hopeful, price control, abandoned. It turned out to be a blunderbuss.

The lesson is plain; it is that there is no halfway house between complete freedom and complete monopoly. It is clear that the country does not want the latter, for, despite the fact that county and borough elections suggest a swing in the direction of Labour policy, the genius of our people is such that if they were faced with this one issue—monopoly or freedom—there is little doubt that they would choose freedom. Effective monopoly in transport is possible only if everything is brought under control—and that includes the private car, the motorcycle and even the bicycle, all of which take a toll of the traffic which monopoly transport could not but claim as its own.

The White Paper on Transport appears to point in the direction of complete freedom at some time or other, even for the railways. That being so, I presume that the railways will elect for the elimination of unremunerative services, and the establishment of an operating structure based on the haulage of full train loads at high speeds between concentration centres fed and tapped by road (a theory which is now finding expression in the daily press and in Parliament). Such a plan requires that the railways shall have full control of the feeder services by road. Indeed, the attitude of railway labour is unfriendly to the introduction of outside road transport in this field, but would probably welcome the development of railway-owned road transport.

In my view, the Road Haulage Executive is doing very good work indeed. We need a nationally-organised road transport group, and the Road Haulage Executive ought to remain as it is, in close association with the railways, but without any right to interfere with its independent competitors.

Alongside the railway-cum-road group, and the Road Haulage Executive group, there should be allowed free competition, subject only to rigid control in regard to safety, fair wages, and the observance of statutory hours of duty and general conditions of service.

Such a system would surely commend itself to all political parties, and by common consent could be allowed to develop undisturbed despite changes in Government. If necessary, this might be ensured by a Charter for twenty years or so, which of itself would be a great incentive to efficiency, if only because of the fear of losing it in the end.

Yours faithfully,
FREDERICK SMITH

65, Hallowell Road, Northwood

Display of British Railways Posters

May 12

SIR,—The poster "Best in the Long Run" reproduced in "The Scrap Heap" of your May 2 issue, coupled with a sight of it when passing through Droylesden today, brings to mind the thought that most of British Railways' attractive posters are seen *only* on railway property.

Surely it would be better if such splendid advertisements were to be shown on general hoardings and thus attract custom to the railways. In other words, such advertising generally and publicly displayed might attract the attention and custom of those who now travel by coach.

Yours faithfully,
G. RICHARD PARKES

"Montcroft," School Lane, Formby

Steam Heating in Warm Weather

May 12

SIR,—The paper on "Railways and Coal" (summarised in your May 2 issue), with its references to the importance of saving a beggarly pound a mile, etc., had hardly been delivered when the Eastern Region was observed to be wasting at least three times that amount. I refer to steam-heating on the East Anglian main lines, which has been vigorously pursued on certain warm days this month. On at least one occasion, too, I found a heater in full blast while the compartment valve was ostensibly shut! Such unsolicited bounty can scarcely appeal to anyone but a hardened fug-fiend.

This is a curious antinomy, and British Railways might seem to be emulating the penny-wise pound-foolish "policy" of other Government departments. The position is all the worse because steam-heating in hard weather, mainly owing, I think, to defects in the steam circuit, is a custom more honoured in the breach than in the observance.

Yours faithfully,
J. D. MUNNION

12, Trinity Road, Chelmsford

THE SCRAP HEAP

Posters Pass the Time

Some of the national railway advertisements are superbly good. I have spent at least twenty minutes in a two-hour wait at Crewe reading the advertisements.—*Ralph Wightman in the B.B.C. programme "Any Questions" on May 16.*

Amphibious Travel

We have been studying a short correspondence between the Commonwealth Relations Office in London and a gentleman in Shetland. It was necessary for this gentleman to proceed from his home to London on Commonwealth business. Commonwealth Relations worked it out that he would be away from home for more than five hours, so they invited him to apply for a subsistence allowance.

Commonwealth Relations also sent him a railway warrant. It was made out "from Lerwick Station to London Station." "Your enclosed railway warrant," wrote the man from Shetland, "from Lerwick Station to London Station I cannot use, as the line from Aberdeen to Lerwick will not be in operation in March. May I please have the warrant amended so that I may travel as far as Aberdeen by the Shetland Bus and thence onwards by train?—*From "The Scotsman."*

Demerara Avis

The accompanying photograph of a locomotive of the former Demerara (now British Guiana Government) Railway shows the last single built by Sharp, Stewart & Co. Ltd., and perhaps the last of that builder's singles still in service. It was ordered on August 19, 1898, and carries the builder's progressive number 4496, with the date 1899. Cylinders are 8 in. by 14 in., coupled wheels 4 ft. 6 in. dia., and weight in full working order 23½ tons. The locomotive is named *Eza*. We are indebted to Mr. Kenneth S. Cantlie for bringing this survivor to our notice, and to the North British Locomotive Co. Ltd. for supplying dates, dimensions and the photograph. We have also received from Mr. Cantlie photographs of two 0-6-0 saddle tank locomotives at work on the same railway, which can probably be identified with two locomotives having this wheel arrangement supplied by Sharp, Stewart in 1863, with 12 in. by 17 in. cylinders and 4 ft. dia. wheels.

Lionesses at Large

Three lionesses in a travelling fair escaped from their cages on a train between Potchefstroom and Klerksdorp in the Transvaal. One arrived at Klerksdorp lying on top of her cage, and was coaxed back. Another was recaptured after sending railway labourers running for high trees. The third attacked a cow, then was shot.—*From the "Daily Mail."*

Best Way to See Britain

The 1.55 p.m. train from Paddington on Friday left punctually and reached Cardiff only two minutes late. It was an unfolding poem of lush beauty. Who would take a motor-car with his eyes always on the traffic and niggle his way through crowded towns, when on a train he can commune with the fields and the hills and the browsing cattle?—*Beverley Baxter writing in "The Sunday Express" under the heading "The best way to see Britain in Springtime."*

Birthday Cakes For Passengers

Some 500 individual birthday cakes were presented to passengers on the Illinois Central Railroad Chicago-New Orleans luxury train, the "Panama Limited," on the occasion of its tenth aniversary as a streamliner on May 3. During this ten-year period the train has travelled approximately seven million miles on its 7,306 trips between the Great Lakes and Gulf of Mexico. About 1,600,000 passengers have enjoyed the hospitality of the all-Pullman "Panama Limited" since it was equipped with streamline equipment in 1942. Introduced 36 years ago, the "Panama Limited" was re-equipped with air-conditioned equipment in 1934. Running time to cover the 921-mile trip between Chicago and New Orleans has been reduced from 22 hr. in 1916 to 16½ hr. in 1952.

Cleaner Engines?

One effect of the textile recession is that the railways are now getting—in some North-Western districts at least—a flood of candidates for jobs. Young men who previously would have turned up their noses at the idea of becoming engine cleaners have drastically revised their ideas. At one locomotive depot near Manchester 25 new cleaners have begun work during the last week or so. "They wouldn't look at the jobs before," said a railway official. "Now, after a taste of short or no time in cotton, they've dropped their objections to dirty and irregular shift work in favour of something they will be sure of—regular money every week and a chance to become firemen and drivers."—*From "The Manchester Guardian."*

Merry-go-Round

(*Meditation on a recent White Paper*)

How often, in this vale of tears,
Whate'er our tribe or station,
We find ourselves, do what we will,
Beset by perturbation!

Some gloried in the ecstasies
Of nationalisation,
Others (I but record the fact)
Wept buckets in vexation.

How often have the passing years
Seemed fraught with sheer frustration!
How often have we felt the need
Of reorientation!

Maybe the first disruptive twinge
Of unco-ordination
Prompted the recent preference for
(Blest word) "unification."

Now transport takes another twist,
In quasi-recantation,
And weary railwaymen must face
More experimentation.

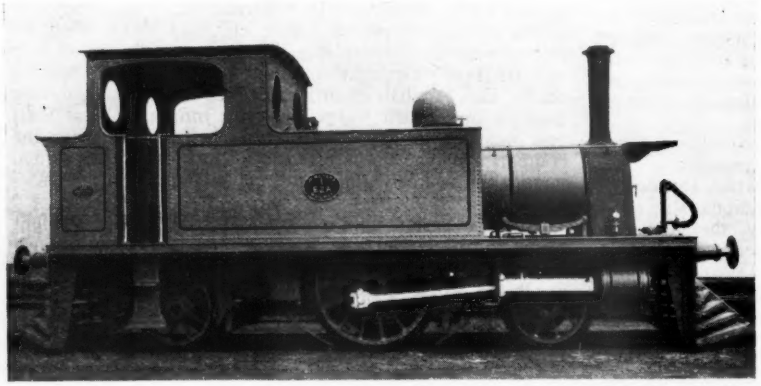
The poor, bedevilled *cheminot*,
Half through mastication
Now finds himself, emetically,
Forced to regurgitation!

Small wonder if his finite mind,
Constantly in rotation,
Rebels instinctively at each
New circum-ambiation.

Small wonder, too, that he recalls,
With mild exasperation,
The retrospective pleasures of
A former generation.

"Roll on, retirement!" mutters he,
In fervent incantation,
Or pleasurably contemplates
Blissful euthanisation!

SCORPIO



No. 1 of the former Demerara Railway, the Sharp, Stewart 2-2-2 "Eza"

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

NEW ZEALAND

Evidence Before Royal Commission

Addressing the Royal Commission on Railways on behalf of the Dominion Settlement & Population Association, Mr. A. Leigh Hunt said that a more substantial immigration policy to help the railways to overcome the staff shortage was essential. Ninety per cent. of the difficulties from which the railways were suffering were due to the lack of population. Competition for staff, not only among ordinary business firms, but between State Departments, was demoralising and farcical.

Mr. P. W. Gasson, Comptroller of the Railways Refreshment Branch, said that there had been suggestions during the past few years that buffet cars should be run, or that dining cars should be reintroduced. Buffet cars would obviate the necessity for leaving the train and enable refreshments to be consumed more leisurely than the present meal halts at stations allow.

Against the use of buffet cars was the fact that they would entail much passing through the day coaches to the disturbance of seated passengers. The seating in the buffet cars would be inadequate to cater for the passengers expeditiously. Serving 300 passengers once would take about four hours. To enable all passengers to have morning tea the service would have to start about 5 a.m. The refreshment rooms would still be required to cope with overflow and holiday traffic, and that would lead to uneconomic duplication of service.

The Secretary of the New Zealand Federated Farmers suggested that from a national point of view it might be possible for an equally efficient transport service to be given by closing some branch lines, and allowing the work to be done by lorries, or on suburban passenger lines by buses.

Report on Main-Line Electrification

The Swedish engineers, Messrs. T. Thelander and E. R. Edenius, who were asked to report to the Minister of Railways on main-line electrification, state in their report that electrification of the Auckland-Wellington line is "not only justified, but is a matter of necessity." The report has been placed before the Royal Commission on Railways. No type of traction other than straight electric, it is said, could give the planned results which the General Manager had set out to achieve.

Preference for a.c. System

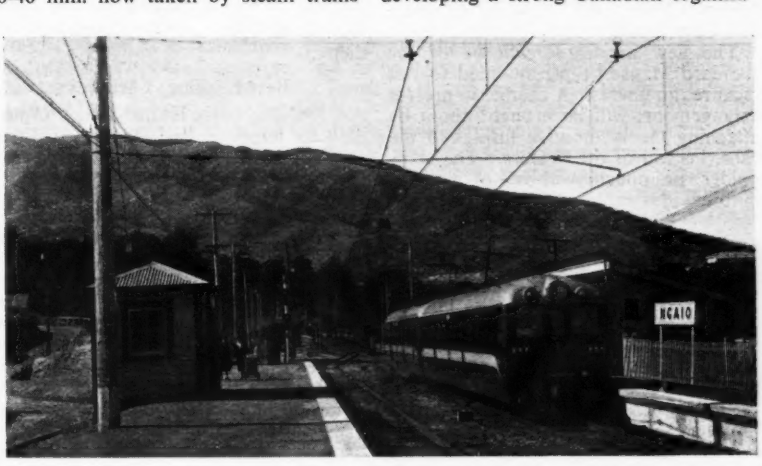
"As conditions of transportation, power supply, and terrain in New Zealand are so much akin to ours, we have not the slightest doubt that your country would benefit by adopting the same system of railway electrification that has brought us so many advantages," states the report. This is single-phase a.c. at 16⅔ cycles, which, it is claimed, has many advantages for the main trunk over the d.c. system in use on the Wellington suburban system.

The report suggests that the existing Wellington suburban electrification might be maintained at least temporarily, separated as it is from the main trunk; locomotives would have to be changed at Paekakariki, 25 miles from Wellington. Later, it would be desirable to carry the a.c. system through to Wellington. The cost of a.c. electrification is estimated at £13,349,000 and of d.c. at £17,654,000.

Electrification Progress

It is announced that electric trains will begin running in the Hutt Valley district of Wellington early in 1953. Travelling time to the main suburb on the route will be reduced from the 36-40 min. now taken by steam trains to 29 min. Multiple-unit stock similar to that on the Paekakariki and Johnsonville lines will be used. The coaches, built by the English Electric Co. Ltd., were delivered some time ago.

"If we did not have immigrants from Great Britain and elsewhere there would not be any Hutt Railway electrification," stated an official of the Railways Department. The labour force is mainly new settlers from the Continent and Britain, who have the reputation of being good workers.



Suburban electric train at Ngaio on Wellington-Johnsonville line, New Zealand Government Railways

CANADA

Montreal Locomotive Works

At the annual meeting of Montreal Locomotive Works Limited on April 22, Mr. D. W. Fraser, Chairman, said that the company has $16,980,000 worth of orders, the largest since 1948 and 26 per cent. higher than a year ago. The company, which has its 50th anniversary this year, has contracts for 77 locomotives totalling $11,575,000.

Dieselisation had been less rapid than the firm at one time expected. It had no doubt, however, that increased dieselisation was inevitable, and that it would actively participate in this development.

Australia, the only continent where the company's steam locomotives were not operating, was the first customer outside Canada for its diesels. The second order came from the Central Railway of Brazil, and was the largest received by any Canadian builder.

Mr. Fraser said that the company's long-term future demanded a well diversified business. With this development in mind the company had launched a new industrial division now building a wide range of equipment for the steel industry. Orders on hand, said Mr. Fraser, show an increase of 320 per cent. on those of a year ago. He referred to progress in developing a strong Canadian organisation and cited the recent appointment of Mr. W. G. Miller an Executive Vice-President. Mr. Miller played an important part in the changeover from steam to diesel production at the American Locomotive Company works and had wide experience in the manufacture of heat exchangers and pressure vessels.

C.N.R. Dieselisation

Mr. Donald Gordon, President of the Canadian National Railways, told the Canadian House of Commons Special Railway Committee that the system would buy no more steam locomotives. He said the C.N.R. had a $95,000,000 five-year programme for conversion to diesel power and expected the changeover to be completed in 15 or 20 years.

Some committee members expressed doubts about aspects of the changeover. It was stated that diesel operation on Prince Edward Island had already thrown men out of work, and that it would be a "heavy handicap" to the Nova Scotia coal industry to lose its

existing sales to the C.N.R. which now buys about 1,200,000 tons a year in the province. Mr. Gordon replied that there would certainly be some "disruption and change" in the C.N.R. staff organisation as the diesel project expanded, but every effort was being made to retain staff and schools were being opened to train staff in the maintenance and operation of diesels. The change would be gradual, as steam locomotives wore out.

Mr. Gordon estimated that Canadian National purchases of coal in the Maritimes would be reduced by about 280,000 tons a year. Diesel operation in Prince Edward Island had proved fully satisfactory. There was an operating saving of $291,000, about 16 per cent., last year.

IRELAND

Improved Single Line Working

Recent successful trials have resulted in a decision by C.I.E. to install new-type mechanical staff exchangers on the Dublin-Galway line, between Clonsilla and Carrowduff.

The new apparatus will be of the standard Manson type, modified to suit local requirements. A change in present arrangements will be brought about by attaching the locomotive fittings to the cabs, instead of the tenders. The staff-holder or pouch will be of entirely different design. It is stated that the principal difficulty is that the change-over will have to take place simultaneously over the whole section.

This apparatus will allow the exchange to be made at speed, compared with the slowing to 15 m.p.h. necessary when hand-exchange is in operation.

Abandonment of Branches

The newly appointed Transport Tribunal is now dealing with its first application made by C.I.E. for permission to close branch lines permanently. The Board, in accordance with the provisions of Section 55 of the Transport Act 1950, has applied to the Transport Tribunal to make an Exemption Order in respect of the branch lines between Birdhill and Killaloe and between Woodenbridge and Shillelagh.

About twelve more applications to close other small branches are to be made. In practice, many of the lines have been closed to passenger and general traffic for many years, and the Order which the Board now seeks is for permission to abandon the lines and to be relieved of the responsibility of maintaining bridges and level-crossings on them.

Beet-Loading Facilities

C.I.E. is to begin immediately a £7,000 plan to improve beet-loading facilities at stations. It is hoped to complete it for the start of this year's beet campaign.

The extension of loading banks and the improving of approach roads will be undertaken at Ballycullane, Bridgetown, Campile, Duncormack, Geashill, Killinick, and Tullamore. At Killinick and Ballycullane, extensions of the existing cattle banks will enable them to be used for beet-loading.

Where improvements to loading-banks are not feasible, mobile mechanical loaders will be installed. These machines are capable of loading 30 tons of beet an hour, and operate on the same principle as the elevators in turf-loading. Stations at which these loaders will be installed include the following: Abbeydorney, Ardfert, Ballina, Lixnaw, and Tubber.

FRANCE

Self-Drive Car Hire

The S.N.C.F. is to extend the facilities of its self-drive car hire service to overseas visitors. Prior arrangement can be made to hire four-seater 7 h.p. Renault cars at any convenient railway station, and although the hire charges, from £1 10s. 0d. to £2 a day according to period of hire, must be paid in French currency, the deposit of approximately £32 can be made in the user's native currency. The daily rates cover insurance, third party risks and an average daily distance of 37 miles; there is a supplementary charge if this average is exceeded.

Publications Received

Chemins de Fer, 1952. Special Number of *Science et Vie.* Paris 8e: 5, Rue de la Baume. 9¼ × 6½ in. 176 pp. Fully illustrated. Paper covers. 200 fr. —In the preface which he has written for this excellent survey of French railway practice today, Monsieur Louis Armand, Director General of the French National Railways, sets forth some of the remarkable achievements of the undertaking during the last few years and its present projects. Leading officers of appropriate departments of the S.N.C.F. have written on such subjects as 50-cycle traction, freight traffic, maintenance of permanent way, and passenger rolling stock. There are many illustrations and diagrams, some in colour.

The Beauty of Old Trains. By Hamilton Ellis. London: George Allen & Unwin Ltd., Ruskin House, Museum Street, W.C.1. 9¼ in. × 6½ in. 147 pp. Illustrated. Price 20s. net.—There are two ways of being taught to appreciate the beautiful. One thrusts an object before the student and tells him why he should admire it. The other assumes that appreciation exists already, and then suggests what has evoked it. Readers of this book will learn many things about the æsthetics of locomotives and trains with which, on analysing their own emotions, perhaps for the first time, they will no doubt agree. If they do not, their enjoyment will be in no way impaired for the author's zestful reminiscence, apt description, and knack of evoking the railway scene of years before his own time carry the reader along with him unprotestingly. His own colour plates, supported by many half-tone reproductions, contribute much to the pleasure, but he seems to underrate his narrative powers when he says in his introduction that a book of this kind would not go far without illustrations. Most readers will agree that even unassisted by a single picture there is passage after passage capable of dissolving their surroundings of the moment and setting them down at some imagined lineside spot where locomotives now on the scrap heap still pass in the glory of gleaming paint, copper and brass.

Mechanical Handling Today (Second Edition).—The lower costs and greater output resulting from up-to-date handling methods have been emphasised by almost every productivity team to visit the U.S.A. In the new edition of an illustrated booklet "Mechanical Handling Today," Chloride Batteries Limited has described instances of costs greatly reduced and production increased by the introduction of battery-electric trucks. In addition, palletisation is discussed in greater detail. Now that British Railways have agreed to accept palletised loads, subject to certain pallet-size limitations, goods in most cases need to be handled only once between factory and customer; handling is cut by as much as 80 per cent., and existing storage capacity is at least doubled. These improvements are fully described. The booklet also shows how battery trucks solve many problems of handling heavy or awkwardly shaped articles, and describes the special features of design of the Exide-Ironclad battery for powering of all kinds of electric factory trucks.

Pneumatic Scaling Hammers.—Details of scaling hammers for the removal of rust, old paint and so on are given in leaflet PT/2100/52 published by Holman Bros. Ltd. The hammers are supplied in three sizes and work at pressures from 60 to 100 lb. per sq. in. The pistons are tipped with tungsten carbide to provide for long life. No 3 machine is a smaller version of the No. 4, while the No. 5, specially designed for scaling large areas, is triple-headed, with three pistons in one casting.

Behind the Railway Scene. Issued by the Victorian Railways Commissioners, Melbourne, Victoria, Australia.—The Victorian Railways have produced this 52-page illustrated booklet both to acquaint members of the staff with the work of other departments and to provide them with the information to answer enquiries about the system. There are eighteen chapters on many aspects of Victorian Railways' activities, under such titles as "Controlling the Trains," "Helping Holidaymakers," and "Keeping the Railway Time."

A Monorail in Los Angeles

Plans are well advanced for a suspended railway, over 44 miles long, from the city centre to San Fernando

IN two years' time, given the consent of the U.S. Federal Government, the city of Los Angeles, California, will have a monorail similar to that which has operated successfully for 50 years in Wuppertal, Germany. Additional means of transport are urgently needed between the suburbs and the centre of Los Angeles but present congestion makes it impossible to add to surface facilities. It is estimated that a railway of the suspended monorail type can be built for $1,500,000 a mile, compared with $6,000,000 a mile for a subway or a tube.

The preference for the suspension type of line has been based largely on the operating record of the Wuppertal line, on which running costs have been very low, most of the original cars are still in service, and there have been few replacements other than those of wheels and bearings. The safety record has been exceptional; since opening, the Wuppertal line has carried over 310,000,000 passengers with but one fatal accident, which had no direct connection with operation. Despite severe damage by bombing during the war, restoration was not difficult, and the line was soon in full working order again.

The route over which the proposed Los Angeles monorail will operate lies between San Fernando and a terminal close to the Union Station in Los Angeles, and is 44 miles in length. For much of its course the arch-shaped supports will straddle the Los Angeles River, and for the remainder the line, carried on V-shaped supports, will be erected along the river bank. The speed of transit will enable passengers to be carried over the 15 miles between Los Angeles and the densely-populated suburb of Van Nuys in 28 min., including nine intermediate stops, as compared with the present 63 min. by bus. Tramcars operate at an overall average of 10 m.p.h. and to raise this figure to 35 m.p.h. should, it is estimated, cut operating costs by monorail to one-third of what they are with existing road transport. The cost of construction, if a line of this description is erected along the course of a stream or the centre of a main road with double carriageways, also is reduced to a minimum because it is not necessary to acquire private property on which to build it.

Height and Spacing of Supports

Preliminary plans are for the use of towers averaging 35 ft. high, and 75 ft. span, spaced at 33-ft. intervals, but spacing up to 200 ft. may be necessary when crossing highways. The minimum headroom on highways between the undersides of the suspended cars and the road surface will be 16 ft. Originally steel structures were envisaged, but the present shortage of steel may compel the use of reinforced concrete, and as the reinforcing bars can be taken from stock, it is estimated that in this way constructional cost will be cut by 10-25 per cent. A reinforced concrete structure also will cost less to maintain, and there will be less vibration and noise; the point last-mentioned will appeal particularly to Americans who have memories of the noisy elevated railways over the streets in New York and elsewhere. The greater weight of concrete structures will require more substantial and costly foundations. The towers will be assembled from reinforced precast concrete sections, and the bases will rest on concrete piles.

On the longitudinal rail beams will be mounted 100 lb. flat-bottom rails of the A.S.C.E. section, and on these the two supporting two-wheel bogies of each car will run. The suspended cars, each providing space for 60 seated and 40 standing passengers, will be provided with concave rollers above, on the centre-line of each suspension bracket, to prevent the possibility of derailing; special devices, known as "swing gauges," also will be fitted to prevent undue swaying of the cars on curves. The use of rubber in the bogie suspensions, and of specially-designed rail-joints, is expected to make the monorail considerably more silent than conventional tramcars or electric trains, and further suppression of noise will be possible if rubber is inserted between the rails and the supporting beams.

The power will be electric, and speeds up to 100 m.p.h. will be possible, though nothing so high is likely to be attained because of the frequent intermediate stops. The stations will be two-storey structures, probably of reinforced concrete, with stairways or escalators to and from street level. The most difficult problem is that of switches to connect the tracks. To permit the supporting arms of the cars to pass, the switches must have a throw of at least 5 ft., or some form of turntable switch must be used. Central control towers will operate the switches and the block signalling.

The Californian legislature, which is in favour of the proposal, has set up a special body, the Los Angeles Metropolitan Transit Authority, to settle the details of routes, services, equipment, and acquisition of any property necessary for construction. As soon as authority has been obtained from the Federal Government in Washington for the use of the necessary material, the work can begin. Other Californian cities also are keenly interested in the development of monorail suburban and urban transport, particularly San Francisco, which plans in this way to serve the metropolitan area on the opposite side of San Francisco Bay, and Sacramento, which would like to build a 4-mile line into a residential area.

BRITISH STANDARD FOR RIVET DIMENSIONS.—A new British Standard (BS 1855:1952) has been published, which specifies the dimensions of bifurcated, tubular, and semi-tubular rivets for general purposes. Illustrations of the rivet types covered appear above the relevant tables of dimensions. Copies of this standard may be obtained from the British Standards Institution, Sales Branch, 24 Victoria Street, London, S.W.1., price 4s.

NEW CANTEEN AT ALEXANDRA DOCK, HULL.—The Docks & Inland Waterways Executive, Humber Ports, announces that the building of a modern canteen at the north-west corner of Alexandra Dock has been authorised. The initial seating capacity of the new building will be for 160 people, but provision is to be made for expansion. Occupation of the site proposed will entail realignment of the roadway alongside the quay and alterations to railway tracks. Opportunity is also to be taken to widen the roadway on the east side of No. 2 Graving Dock, and to pave a portion of the quay north of the 100-ton crane. The total cost of the works authorised is approximately £25,000.

ALLOY STEEL ECONOMY.—Arrangements for economising in the use of nickel and molybdenum in alloy steel, and for increasing its production, have been worked out by the Ministry of Supply with the alloy steel makers and main consumers. They are already in operation to a substantial extent, and become fully effective on June 2. In order that they may be applied generally the Minister of Supply has issued directions to steel-makers. Certain special types of alloy steels, such as tool steels and those designed to resist heat and corrosion, are not affected. The general effect of the directions is to divide alloy steels containing nickel or molybdenum into three groups: (*a*) Those containing little nickel or molybdenum which may be supplied to any consumer up to the quantity for which he holds an authorisation under the Steel Distribution Scheme; (*b*) those richer in these elements, which may only be supplied for particular purposes; and (c) those richer still, the supply of which is prohibited except as specifically approved. Notes for consumers are being issued through the authorising departments.

ROME STATION AS HELICOPTER LANDING GROUND.—The first mail and passenger helicopter service in Italy was inaugurated in Rome on May 1. The roof of the new Rome Termini station buildings is being used as the helicopter landing ground. The service will be run in connection with the international and national air lines. The Rome police and Customs guards will also use the station for their own helicopters.

Gas-Turbine Locomotive Tests

Dynamometer car trials on Western Region to check fuel consumption and thermal efficiency

THE operation of gas-turbine locomotives in revenue service has no previous basis on which traffic or motive power departments can estimate train loads, schedules, fuel consumption or availability. Much of the information needed can be gathered only by putting the locomotive out and observing it. But certain data can be obtained once and for all by dynamometer car tests of more or less the usual type, adjusted to suit the new motive power. Therefore in September last the Western Region of British Railways undertook such trials with the Brown Boveri gas-turbine locomotive No. 18000 on normal express trains between Paddington and Plymouth, namely, the 3.30 p.m. down, stopping at Taunton and Exeter, and the 7.15 a.m. up, stopping at Totnes, Newton Abbot, Teignmouth, Dawlish, Exeter, Taunton, and Westbury.

Between Plymouth and Newton Abbot the line is of a totally different character from the 194 miles east of Newton Abbot; but the gradient profile and characteristics are so well and widely known that they need not be referred to here. Train loads generally were 360 to 400 tons east of Exeter and 240 tons west of that city in the down direction. Coming up, loads were 228 tons over the heavy grades from Plymouth to Newton Abbot, and 355 to 390 tons eastwards to London. Average running speeds were 53½ m.p.h. down and 50 m.p.h. up. The locomotive is stated to weigh 119·2 tons, compared with the figure of 116 tons given when the locomotive was introduced (a full description appeared in our May 5, 1950, issue).

As in most main-line runs the average d.b.h.p. needed was comparatively low, though a surprising variation, unexplained in the test report just prepared by British Railways, was from an average of 721 d.b.h.p. on one down trip to 831 on the second, two days later, with the same load. Another factor evaluated by the tests was that in both up and down directions power was " on " for only 182 to 189 miles out of the 225 miles between the terminal points. With the turbine unit idling when running or while standing in stations the fuel consumption is about a gallon a minute.

In the down direction trailing ton-miles per trip were 78,000; actual running time 252 min.; work done 2,520 and 2,824 d.b.h.p.-hr. on the two trips with corresponding average d.b.h.p. of 721 and 831; average d.b. pull 2·25 and 2·6 tons; oil used per d.b.h.p.-hr., 2·05 and 1·93 lb., 4 to 4½ per cent. of this being light diesel oil and the remainder heavy oil with a viscosity of 790 to 836 sec. Redwood at 100° F., a specific gravity of 0·94 at 60° F., and a calorific value of 18,600 B.Th.U. per lb. Ash content varied from 0·01 to 0·03 per cent.; sediment was 0·02 per cent., the water content nil, the pour point 45° F., and the flash point (closed) 200/216° F.

The single-combustion-chamber and seven-stage gas turbine plant installed has a designed nominal maximum output of 2,500 h.p. at 5,300 r.p.m. with a gas temperature of 1,100° F. and a fuel consumption of 0·87 lb. per h.p.-hr., corresponding to a thermal efficiency of 16·9 per cent. On the tests, the temperature of 1,100° F. before the turbine was never quite reached on notch 8, that is one off the top notch, and this corresponded to a generator output of 1,500 kW. and fuel consumption at the rate of 2,200 lb. an hour. At half load, *i.e.*, 750 kW. generator output, the gas temperature was only 650 deg. F.

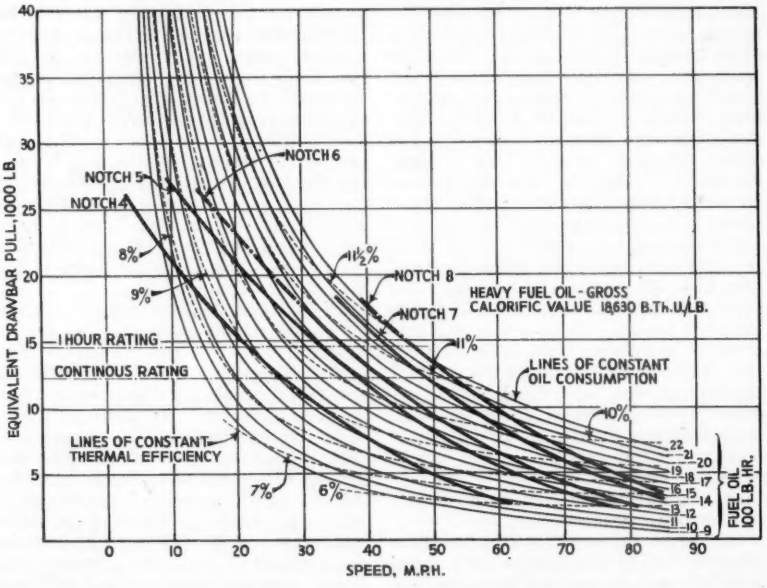


Fig. 1—Drawbar pull characteristics of the Western Region Brown Boveri gas turbine locomotive No. 18000

Data Required from Tests

An object of the tests was to check the outputs needed in service and to obtain fuel consumptions per d.b.h.p.-hr. and per ton-mile; and also to check the designed tractive effort-speed characteristics, the most notable feature of which is the restriction of the starting tractive effort to 31,500 lb. and its maintenance up to a speed of 21½ m.p.h.

In Fig. 1 an effort has been made to relate directly the equivalent drawbar effort and power to the speed, controller notch, heavy fuel oil consumption, and efficiency. Emphasis may be laid on the fact that the fuel consumptions refer only to the heavy fuel oil and not to the total oil; the heavy oil forms about 96 per cent. of the total oil.

Curves presented in Fig. 1 show that the starting tractive effort and its maintenance up to speed could not be checked properly on the dynamometer car runs. The controller has nine notches, but the top notch was not required except on odd occasions of short duration, and not enough for any

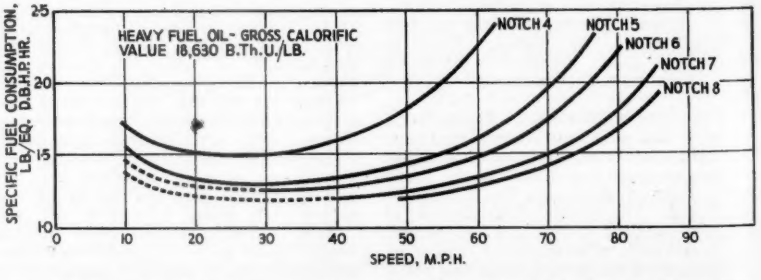


Fig. 2—Speed and fuel consumption characteristics of the Brown Boveri gas turbine locomotive

observations to be relied on. Even so, a starting drawbar tractive effort of 25,000 lb. could be obtained and maintained up to 16½ m.p.h. on notch 6; and 14,900 lb. at 47 m.p.h. on the one-hour rating of the electrical equipment on notch 8. Continuous rating of 12,450 lb. drawbar pull at speeds up to 53 m.p.h. was maintained also, and both within the line of 2,200 lb. an hour oil consumption.

Another feature brought out by Fig. 1 is that thermal efficiency of gas-turbine locomotives rises with increase of load, though of course on the drawbar value it falls with increasing speed on any given controller notch. This increase in thermal efficiency—or decrease in specific fuel consumption—with increase in loading is different from the conventional steam locomotive of proportions normally found, where the value rises first and then drops, due mainly to the loss of unburnt fuel.

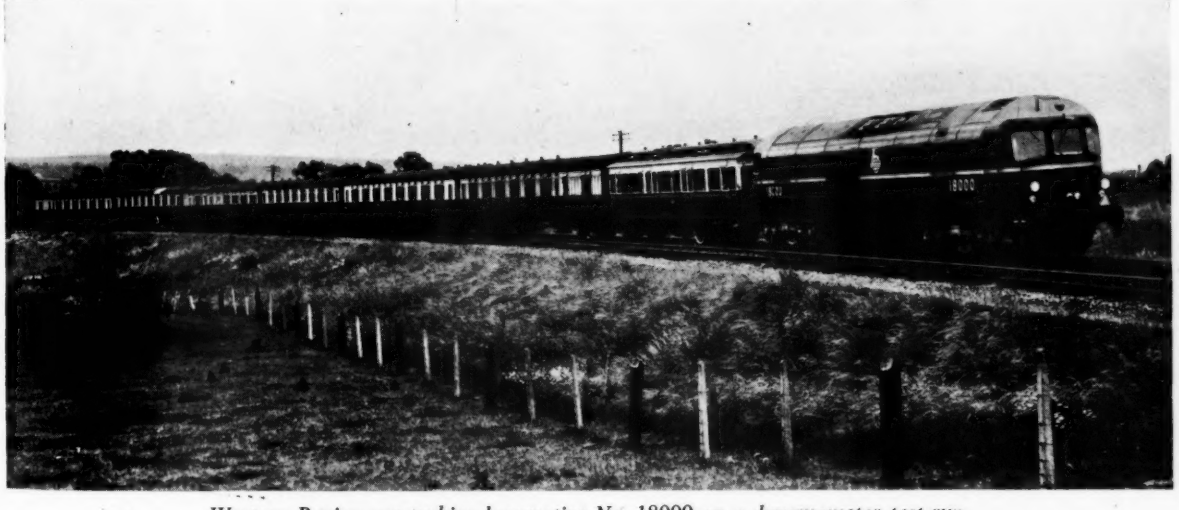
The curves shown in Fig. 1 and 2 refer to drawbar outputs and consumptions. They are not to be taken as referring to the gas-turbine plant in their general shape. Though the specific fuel consumptions come down as higher load is developed, as shown in Fig. 2, the specific consumption on any controller notch goes up as the track speed rises, because more power is being used between the main generator and the drawbar in propelling the locomotive itself. Optimum specific consumption is seen to be 1·2 lb. per d.b.h.p.-hr. This corresponds to a drawbar thermal efficiency of nearly 12 per cent., corresponding data being 20 m.p.h. track speed, 2,200 lb. of fuel consumed an hour, controller notch 8 and 1,940 d.b.h.p. By competent driving it is possible to maintain something like optimum thermal efficiency, say equivalent to a consumption of 1·2 to 1·3 lb. per d.b.h.p.-hr., at speeds up to 55 or 60 m.p.h., if the relevant loading is high, by the use of controller notches 6 to 8.

But if the gas-turbine locomotive shows a difference in the shape of its thermal efficiency curve compared with that of a steam locomotive, they are still both governed in practice by the principles of railway operation, which, in effect, mean that the thermal efficiency over a whole run is low. The curves in Fig. 1 and 2 show that thermal efficiencies of over 10 per cent. at the drawbar *can* be maintained: but the *average* drawbar thermal efficiencies of the two test runs down to Plymouth were only 7·4 and 7·9 per cent., and of the two up runs 7·0 and 7·2 per cent. That is, there is a drop of 30 to 35 per cent. in normal service. This accords with steam locomotive practice, where, for example, on Anglo-Scottish runs a drawbar thermal efficiency of 6 to 6½ per cent. is about the normal, contrasted with 8½ to 9 per cent. under optimum test conditions.

TEST OF WESTERN REGION GAS TURBINE LOCOMOTIVE NO. 18000

Trains—Down. 3.30 p.m. Ex Paddington to Plymouth. Slipping 1 coach at Heywood Rd. Jcn. and stopping at Taunton and Exeter
Up. 7.15 a.m. Ex Plymouth to Paddington. Stopping at Totnes, Newton Abbot, Teignmouth, Dawlish, Exeter, Taunton and Westbury.

	1	3	2
Run number	1	3	2
Date	11.9.51	13.9.51	12.9.51
Direction	Down	Down	Up
Weight of locomotive ... Tons	119·2	119·2	119·2
Load and No. of vehicles—			
Paddington–Westbury ... Tons tare/No. of vehicles	395 for 12	395 for 12	—
Westbury–Exeter ... ... ,, ,, ,,	359 for 11	359 for 11	—
Exeter–Plymouth N. Rd. ... ,, ,, ,,	239 for 7	239 for 7	—
Plymouth N. Rd.–Newton Abbot ,, ,, ,,	—	—	228 for 7
Newton Abbot–Exeter ... ,, ,, ,,	—	—	388 for 12
Exeter–Paddington ... ,, ,, ,,	—	—	388 for 12
Distance—Actual ... ... Miles	225·2	225·2	225·2
Under power ... ... ,,	182·2	189·4	185·6
Ton-miles—excluding loco.	78,000	78,000	82,400
Time—Booked running ... ... Min.	259·0	259·0	275·0
Actual ,, ... ,,	252·3	251·4	269·0
Overall (including stops) ... ... ,,	265·5	264·4	296·3
Actual less drifting and idling (under power) ,,	209·9	204·0	213·4
Average speed ... ... m.p.h.	53·6	53·7	50·2
Work done ... ... d.b.h.p.-hr.	2,520	2,824	2,621
Average d.b.h.p.	721	831	736
Average d.b. pull ... ... Tons	2·25	2·59	2·46
Oil—Total used : Heavy ... ... lb.	4,960	5,230	5,450
Light ... ... ,,	224	223	250
Total ... ... ,,	5,184	5,453	5,700
lb./d.b.h.p.-hour	2·05	1·93	2·17
Oil—Total used under power : Heavy ... ... lb.	4,496	4,727	4,759
Light ... ... ,,	177	172	180
Total ... ... ,,	4,673	4,899	4,939
	Overall total / Under power	Overall total / Under power	Overall total / Under power
Oil rate—Heavy ... ... lb./hr.	1,121 / 1,282	1,210 / 1,350	1,102 / 1,337
Light ... ... ,,	50·6 / 50·6	50·6 / 50·6	50·6 / 50·6
Total ... ... ,,	1,176·6 / 1,332·6	1,260·6 / 1,400·6	1,152·6 / 1,387·6
Oil rate, drifting and standby, H & L—Total ... ,,	550·6	550·6	550·6
Gross calorific value of fuel oil—Heavy ... B.Th.U./lb.	18,530	18,580	18,680
Light ,,	19,610	19,590	19,530
Oil/mile ... ... lb.	23·02	23·20	24·2
Work done at drawbar × 100/1 ... ... Per cent.	6·95	7·42	6·56
Total heavy fuel oil used / Work done at drawbar × 100/1 ... ,,	7·67	8·20	7·51
Heavy fuel used under power / Work done at drawbar × 100/1 ... ,,	6·66	7·09	6·25
Total heavy and light fuel oil used / Work done at drawbar × 100/1 ... ,,	7·40	7·91	7·22
Total heavy and light fuel oil used under power			



Western Region gas-turbine locomotive No. 18000 *on a dynamometer test run*

Progress of the Brussels Junction Railway

Opening this year of two tracks throughout between new Nord and Midi high-level stations

Northern end of the Junction line, looking south from new Brussels Nord (high-level) station towards centre of city

IT is expected that two tracks of the six-track Brussels Junction Railway will be opened for traffic on October 5. They will be those in the centre, linking platforms 6-12 of the new high-level Nord Station with platforms 4-9 of the new Midi Station. Descriptions of the project and illustrations showing the heavy constructional work involved appeared in our February 13 and October 1, 1948, issues.

Some of the Antwerp-Brussels electric trains, which at present run into the Nord terminus in Brussels, will be extended over the new line to Midi. It is understood that steam trains, complete with their main line steam locomotive, will be hauled over the line by electric locomotives; the following international services are included:—Ostend-Basle, Ostend-Cologne, Brussels-Basle, Brussels-Cologne, and Brussels-Paris. This is presumably a provisional arrangement until the electrification of the main lines radiating from Brussels is completed. Paris-Amsterdam trains will still use the Ceinture line round the west of the city until the engineering works between Schaerbeek and Nord are completed. Railcar services running into Brussels will also continue on to the Junction line, calling at all stations and *haltes*.

Completion of Stage Two

The second stage of the work will be completed by October, 1953, when the easternmost pair of tracks will also be ready; the westernmost pair will be brought into use at the same time if work on an additional platform at the Halte Centrale, to be used by railcars running to Brussels Airport, is far enough advanced.

Tracks serving platforms at the new Nord Station will be electrified and those serving platforms 14-18 at Midi, already electrified, will be linked to the easternmost pair of tracks of the Junction. Brussels Nord substation will be brought into use, and the Antwerp-Brussels and Brussels-Charleroi electric services will be merged and use the easternmost Junction lines. The completion of this stage will allow Brussels Nord and Allée Verte termini to be abandoned.

The final stage, scheduled for the end of 1954, will include the completion of underline bridges between Brussels Nord and Schaerbeek and the inauguration of tracks 1, 2, and 3 at Nord (high level). At the Midi Station the administrative buildings and postal block, and two tracks serving them will be completed.

The extra platform for railcars at the Halte Centrale, already mentioned, is additional to the original plan for the station. The intention is that airways passengers shall be able to proceed direct from the terminal building of Sabena (Belgian National Air Lines), adjacent to the Halte Centrale, to the bay platform, where they will board a railcar for Melsbroeck, the city airport. The railcars will run via Brussels Nord and Saventhem, where they will leave the Louvain line and reach the airport by a branch. The time for the journey is estimated at 15 min., and two railcars an hour are proposed during rush-hour periods of the National Railways, and at other times, three or four an hour.

Railcar set at Halte de la Chapelle conveying a special party on a tour of inspection of the line

Mechanical Handling in Paris Cartage Organisation

Equipment used by French Railways road subsidiary to increase traffic handling capacity

By C. R. Cazenave,
Head of Paris Road Haulage Services, French National Railways

THE time spent in terminal handling operations is an important part of the day's work of a vehicle, specially in collection and delivery. To increase its output, S.C.E.T.A., the road transport subsidiary of the French National Railways, has experimented for terminal traffic in Paris with mechanical equipment of which that described in this article is the most important.

Anthony Hoists Limited, of Ruislip, Middlesex, manufactures and supplies equipment known as the Anthony Tailboard Loader. This takes the place of the tailboard of a lorry with sides and is, in fact, a " powered tailboard " which may be lowered like a lift.

Power transmission is hydraulic and pressure is provided by an oil pump controlled from the gearbox of the engine, the lever of which is in the cab. Two levers are placed at the left-hand side of the back of the lorry. One controls the automatic locking of the tailboard in the vertical position, the other its lowering of the tailboard in the vertical position, the other its lowering, raising, stopping and starting. It can be stopped and held in position at any height, even if the engine fails or the oil transmission should be interrupted; when rising, it stops automatically at lorry floor level. The lifting arms are of steel tubing with brass bearings.

The area of the lift gate is 2·18 × ·84 metres, and the power is 900 kg. This type of equipment, already well known in the United States, enables the Paris cartage organisation to handle heavy loads.

Bonnier Crane

The Bonnier crane is placed on the left-hand side at the back of a flat platform lorry. It is controlled from the gearbox which works the winding gear; the lever is in the cabin, and that of the winding gear at the back left-hand side. The cable is kept taut, but can be released at any time to attach a load. The swan neck of the crane, swivelling 360°, can be locked in any direction. It can be folded back when out of action.

Two telescopic legs with adjustable bases ensure the stability of the back of the vehicle. The span is 1·1 m.; the height between hook and lorry floor level, 2·3 m.; and the power 1·5 *tonnes*.

The Ralph tractor crane is an ordinary four-wheel tractor with Scammell automatic couplings fitted at the back of the driving cab with a hydraulically-operated crane. It can transfer a load from wagon to trailer, or from trailer to the ground, and can make short runs with the load on its chassis.

The hydraulic power is transmitted by a pump operated from the gearbox. A set of four levers placed in the cab operates jacks specially built for heavy lifting, with a wide safety margin. The following movements can be made:—

1st movement: vertical extension of the arms.

2nd movement: swivelling of the arms to the back round an axle, perpendicular to the chassis.

3rd movement: synchronised with the second movement: the jacks at the end of the chassis are automatically lowered to the ground to relieve the strain during the handling operations.

4th movement: tilting of the brackets supporting the lifting hooks.

Ralph tractor crane with trailer

Ralph tractor crane lifting container

It has the following dimensions:—

Maximum span	3·85 m.
Working span at the back of the tractor	1·4 m.
Available height under hook	4·8 m.
Power	5 tonnes

The Ralph tractor crane, designed by S.C.E.T.A., permits door-to-door delivery, and handling at consignees'

Lorry fitted with Anthony tailboard loader which may be raised or lowered, as shown on right

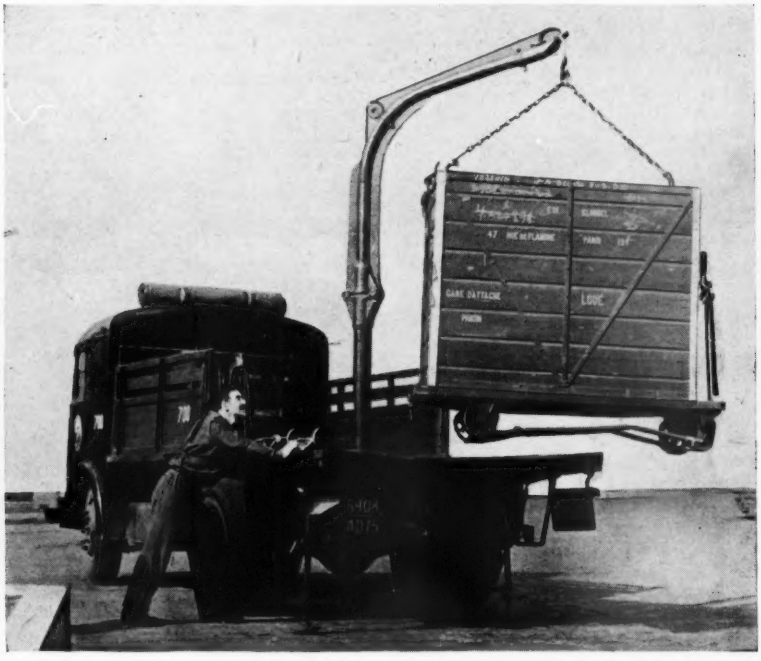
premises of any type of container (20 cu. m. and over), as well as heavy or cumbersome goods.

The S.C.E.T.A. tractor crane has been designed for the same purpose as the Ralph crane. Its design is, however, different and is claimed to be much simpler.

Power is taken from a pump worked from the gearbox. In the first movement, two side jacks bring the jib from a horizontal to a vertical position by rotating round a point. During that operation, a rod lifts the bracket higher than the top of the jib. The control is from the cab. Two small pneumatic wheels at the bottom of the jib support the weight of the load.

The second movement is controlled by a lever placed at the back left-hand side; it works a hydraulic jack operating a pulley block with a hook hanging from the bracket.

Bonnier side crane in folded position after use



Bonnier side crane lifting a containe

The working span is 1·25 m.; the height under hook, 4·85 m.; and the power is 5 *tonnes*.

All this equipment has the prime advantage of forming an integral part of the vehicle while the vehicle continues to perform its normal functions. It has enabled S.C.E.T.A. to save much time, increase daily output, avoid accidents, obviate the risk of loads being dropped and damaged, and facilitate door-to-door collection and delivery of containers or heavy, fragile and awkward loads, and overcome the terminal handicap of door-to-door traffic by rail.

SCOTTISH REGION GOLF CHAMPIONSHIP.—This year's British Railways (Scottish Region) Golf Championship was won by J. Donald of Irvine, from a field of 40 competitors, with rounds of 72 and 79 over the King's and Queen's Courses at Gleneagles. D. Hamilton, Glasgow, was runner-up with a total of 152 and J. D. Brown, Nairn, won the prize for the best scratch score over the Queen's Course.

RAMBLERS' AND CYCLISTS' EXCURSIONS.—So successful was the experimental ramblers' and cyclists' excursion from Newcastle on May 4, when 394 passengers and 17 cycles were carried by train to Bellingham, Falstone, Kielder Forest, and Riccarton, that the North Eastern Region ran another on May 18 from the West Riding, Bradford, and Leeds to Coxwold, Nawton, Helmsley, and Kirbymoorside. Others are scheduled for June 15, Newcastle to Penrith, Threlkeld, and Keswick; July 6, Newcastle, South Shields, Sunderland, Middlesbrough to Castleton, Glaisdale, Sleights, and Whitby; September 7, Newcastle to Falstone, Hawick, and St. Boswells; and September 14, West Riding, Bradford, and Leeds to Ribblehead, Dent, Garsdale, Hawes, Askrigg, and Aysgarth. Walks are organised from the railheads by the Ramblers' Association and led by guides. The cycle tour also arranged for these occasions is led by an official of the National Cyclists' Union.

MATERIALS HANDLING APPLIANCES.—Exhibits of I.T.D. Limited (Industrial Truck Development) at the Mechanical Handling Exhibition, Olympia, from June 4 to 14 will consist mainly of two types of power-driven trucks. The first type will consist of fork lift equipments with capacities from 1,000 to 5,000 lb. and lifting heights from 6 ft. to 14 ft. on chassis powered with diesel, petrol, or electric units. The second type will be industrial platform trucks ranging between 2,000 lb. and 4,000 lb. in load-carrying capacity, provided with either fixed or elevating platforms. Equipment displayed for the first time at this exhibition will include the 2DH/9 fork-lift Stacatruc with Perkins P-4 diesel engine, and the 2PH fork-lift Stacatruc with Austin 4-cylinder engine.

BRIGHTON WORKS CENTENARY SPECIAL.—In October, the Railway Correspondence & Travel Society is organising special all-Pullman trains between Victoria and Brighton to commemorate the centenary of Brighton Locomotive Works. The dates considered are October 5, 19 and/or 26. The train will be hauled by a Marsh Atlantic locomotive on a 60-min. schedule in each direction. At Brighton, the locomotive works will be visited, and a special tour of the Kemp Town branch will be made behind the oldest locomotive on the Southern Region—Stroudley "Terrier" No. 32636, built at Brighton in 1872. A number of tickets will be available to non-members. Those interested should notify Mr. R. K. McKenny, 46, Friern Barnet Lane, London, N.11.

British Railways Class "3" Standard Tank Engine

Designed to replace various tender and tank engines of similar power classification now becoming obsolete

THE building of the first of a new standard class "3" 2-6-2 tank engine has now been completed at the Swindon works of the Western Region. The tractive effort of the new type is 21,490 lb. as compared with 25,100 lb. for the class "4." Of the 20 locomotives of class "3" 2-6-2 to be built in 1952, the first ten are allocated to the Western Region and the rest to the Southern Region. They are numbered 82000 and 82019, and have been designed and built under the direction of Mr. R. A. Riddles, Member for Mechanical & Electrical Engineering, Railway Executive. The parent office for the design was Swindon, while certain sections were designed at Brighton, Derby and Doncaster. Like the class "4" both tender and tank types, the class "3" has almost universal availability over main and secondary lines throughout Britain, and is designed to replace various tender and tank engines of similar power classification now becoming obsolete.

The leading dimensions are as follow:—

Cylinders, dia. and stroke ...	17½ in. by 26 in.
Wheels, coupled, dia.	5 ft. 3 in.
Wheels, pony trucks, dia. ...	3 ft.
Wheelbase, coupled	15 ft. 4 in.
Wheelbase, total	32 ft. 7 in.
Heating surface :	
Tubes	932·9 sq. ft.
Firebox	118·4 sq. ft.
Total evaporative	1,051·3 sq. ft.
Superheater	190 sq. ft.
Grate area	20·35 sq. ft.
Boiler pressure	200 lb. per sq. in.
Tractive effort	21,490 lb.
Adhesion factor	5·08
Weight of engine in working order	74 tons 1 cwt.

British Railways standard class "3" tank engine

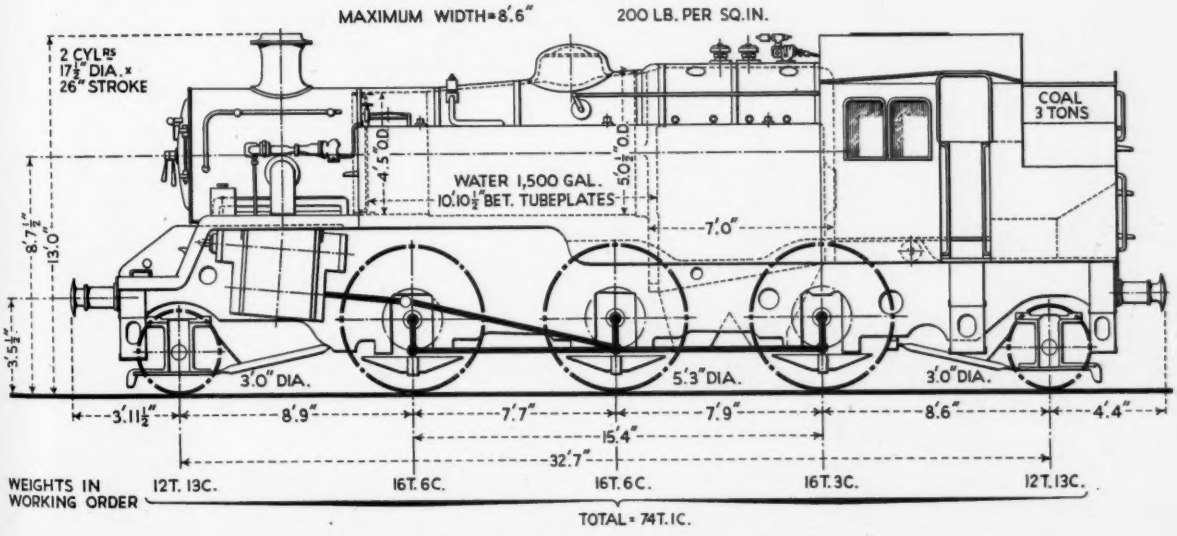


Diagram of principal weights and dimensions

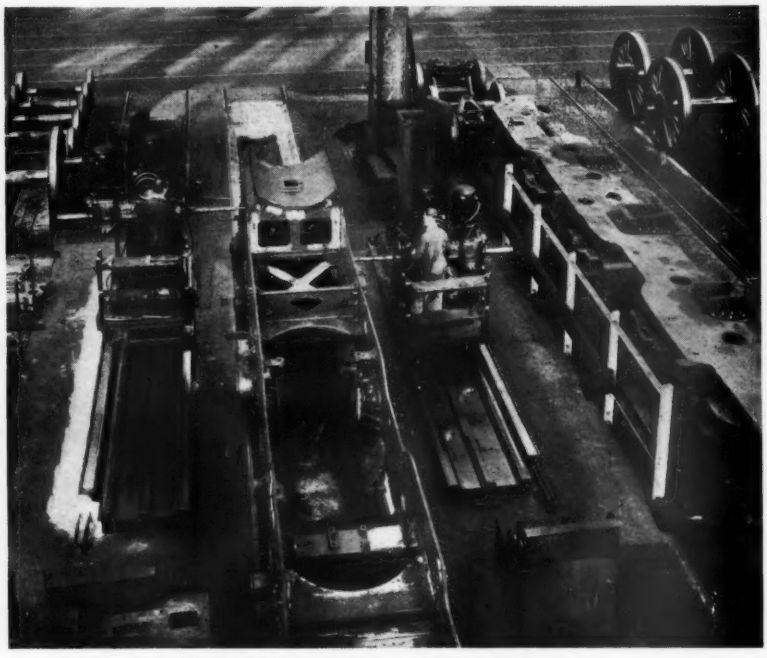
The boiler follows closely the design of the former G.W.R. standard "2" used on the "5100" "6100" "8100" and "5600" classes. The steel and copper flanged plates for the firebox are common to both designs, but the barrel is 5⅛ in. shorter. This consists of two rings, the second of which is tapered, the outside dia. being 4 ft. 5 in. at the front and 5 ft. 0½ in. at the firebox end. Both barrel rings are made from high tensile steel plate, ½ in. thick. The smokebox tubeplate is of the drumhead type, ⅝ in. thick, and there are 18 large flue tubes 5⅛ in. dia. outside, 7 s.w.g. thick; and 145 small tubes 1⅜ in. dia. outside, 12 s.w.g. thick. The length between tubeplates is 10 ft. 10½ in.

The firebox is of the Belpaire type, 7 ft. long at the bottom, with an outside width of 4 ft., giving a grate area of 20·35 sq. ft. The steel and copper wrapper plates of the outer and inner fireboxes respectively are both $\frac{9}{16}$ in. thick. Both throat and back plates are vertical, and the copper tubeplate is ⅞ in. thick. All the firebox water space stays are made of Monel metal fitted with steel nuts inside the firebox, while the roof, longitudinal, and transverse stays are of steel. The lagging of the boiler and firebox consists of asbestos mattresses.

A rocking grate and self-emptying ashpan are fitted, as many details as possible and the controls being similar to those on other classes of standard locomotives. The boiler mountings, regulator, clack valves and manifold are similar in design to those used on classes "4" and "5" standard locomotives. The smokebox self-cleaning arrangement also follows closely these two classes. The blast pipe has a plain circular cap, 4½ in. dia., and this contains the four nozzles of the Cardew blower. A single-note whistle is fitted.

Frame Design

The engine frame, as on existing British Railways standard locomotives, is adequately stayed both horizontally and vertically, whilst boiler securing and springing arrangements and the method of staying axlebox guides are also rather similar to those obtaining on the other classes. The coupled wheelbase is 15 ft. 4 in., as on the class "4" 2-6-4 tank engine, and the driving wheel divides it in the same proportion on both classes.



Drilling holes in frame and smokebox saddle

Other similar design features include the axleboxes, axlebox guides, method of lubrication and cylinder cock and sanding arrangements. The cab layout, of which a mock-up was made, follows as far as possible the design laid down as standard for tender engines. The two cylinders, which carry cast-iron liners, are cast in steel from the pattern used for the ex-L.M.S.R. class "4F" 2-6-0 locomotives. They are 17½ in. dia. × 26 in. stroke and are placed outside the frames.

Nominal 10-in. dia. piston valves are provided, the rear head being 9¾ in. dia. for ease of insertion and removal. They are operated by Walschaerts valve gear, giving a full gear travel of 6 $\frac{29}{32}$ in. corresponding to a cut-off of 75 per cent. with a steam lap of 1½ in. and lead of ¼ in. The motion has more in common with the class "4" tank engine than with other British Railways standard locomotives as both have the two-bar "crocodile" type of crosshead, and the same method of reversing using a sliding block in a slotted extension to the radius rod behind the motion plate. The leading pony truck is similar in all respects to that fitted to the class "4" tank engine, the sideplay being controlled mainly by double helical springs, while the trailing truck is of the swing link type. The method of transmitting the load to the axleboxes and the sideplay control retarding gear are the same for both pony trucks.

The tanks and bunkers are of welded construction throughout, the former being carried at the leading end on the outside slide-bar bracket and at the trailing end on a frame bracket. Unlike the class "4" tank engine, no water is carried under the bunker. The tanks have a water capacity of 1,500 gal. and the bunker a coal capacity of 3 tons.

Principal Contractors

The following is a list of the principal suppliers of equipment for these locomotives:—

Vacuum brake ejector, driver's brake valve, graduable steam brake valve, and associated brake details.	Gresham & Craven Limited
Self-aligning ball bearings for valve gear return cranks.	Skefko Ball Bearing Co. Ltd.
Buffers	Geo. Turton, Platts & Co. Ltd.
Asbestos mattresses	J. Taylor Dunford & Co. Ltd.
Manually-operated blowdown valve.	Everlasting Valve Co. Ltd.
Mechanical lubricators for cylinder and axlebox lubrication, atomisers, and check valves.	Gulf Oil Co. (Great Britain) Ltd.
Superheater elements	Superheater Co. Ltd.

RECONSTRUCTION OF FORRES STATION, SCOTTISH REGION.—On April 27, 1945, the buildings on the main-line platforms at Forres Station, Scottish Region, were partly destroyed by fire and since then further damage has been caused by gales and severe weather. It is now intended to remove the existing premises and build modern accommodation on the Inverness-Perth platforms. The platforms, which at present vary in height, will be raised to the standard height of 3 ft. above rail level. Reconstruction is expected to begin shortly. The original station at Forres was opened in 1858. A new station was built in the triangle formed by the junction when the main line to the South was opened from Forres to Dunkeld in 1863. The original station building of 1858 was then converted into the Stationmaster's house and is still standing to the north of the present station site.

WITHDRAWAL OF DUMFRIES - LOCKERBIE SERVICE.—On Monday, May 19, the passenger service was withdrawn from Locharbriggs, Amisfield, Shieldhill, and Lochmaben Stations on the Dumfries-Lockerbie branch, Scottish Region. Passenger train parcels and miscellaneous traffic continue to be dealt with at Locharbriggs, Shieldhill, and Lochmaben Stations and are conveyed by British Railways motor vehicle to connect with passenger trains at Dumfries or Lockerbie. Parcels and miscellaneous traffic to and from Amisfield are handled at Locharbriggs Station. There has been no change in the freight train traffic arrangements at Locharbriggs, Shieldhill, and Lochmaben Stations but at Amisfield freight traffic only in full wagon loads is dealt with. Freight train traffic in less-than-wagon loads to and from Amisfield is dealt with at Locharbriggs.

RAILWAY NEWS SECTION

PERSONAL

Mr. C. F. Rose, Assistant Locomotive Works Manager, Doncaster, Eastern Region, has been appointed Locomotive Works Manager (Acting), Doncaster.

The Scottish Region of British Railways announces that Dr. Douglas Hutchinson, Glasgow, has joined the staff of the Regional Medical Officer, Scottish Region. Dr. Hutchinson, who was educated at Whitehall and Allan Glen's Schools, Glasgow, graduated M.B., Ch.B., at Glasgow University.

Indian Railways Regrouping

In connection with the inauguration of the Eastern, North Eastern, and Northern Railways, of India, which, as recorded in our May 16 issue, took place on April 14, the following appointments have been made:—

Eastern Railway

Mr. K. B. Mathur to be General Manager.
Mr. M. N. Chakravarti to be Senior Deputy General Manager.
Mr. P. C. Chakravarthi to be Chief Engineer.
Mr. N. C. Kapur to be Chief Operating Superintendent.
Mr. J. N. Das to be Chief Commercial Superintendent.
Mr. K. Ramchandran to be Chief Mechanical Engineer.
Mr. R. C. Sen to be Chief Electrical Engineer.
Mr. B. C. Basu to be Chief Signal Engineer.
Mr. D. P. Mathur to be Financial Advisor & Chief Accounts Officer.
Dr. P. N. Gokhale to be Chief Medical Officer.

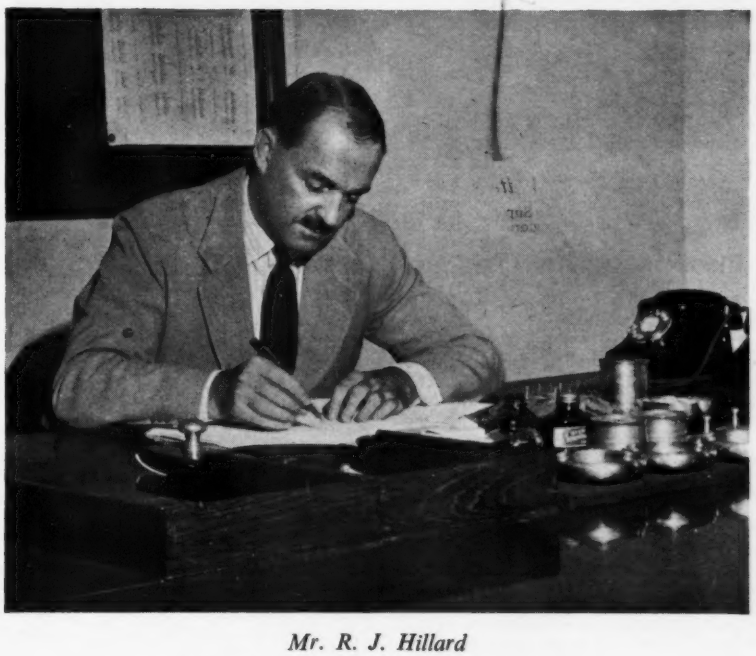
North Eastern Railway

Mr. G. Pande to be General Manager.
Mr. B. Arora to be Senior Deputy General Manager.
Mr. W. G. Latham to be Chief Engineer.
Mr. J. S. Mathur to be Chief Operating Superintendent.
Mr. B. Mazumdar to be Chief Commercial Superintendent.
Mr. P. G. C. Peyton to be Chief Mechanical Engineer.
Mr. S. L. Narayana Iyer to be Chief Electrical Engineer.
Mr. Z. A. Meneze to be Chief Signal Engineer.
Mr. S. R. Guha to be Financial Advisor & Chief Accounts Officer.
Dr. C. S. Ramchandra Iyer to be Chief Medical Officer.

Northern Railway

Mr. Karnail Singh to be General Manager.
Mr. Daya Chand to be Senior Deputy General Manager.
Mr. K. P. Modwel to be Chief Engineer.
Mr. B. B. Mathur to be Chief Operating Superintendent.
Mr. Ramchandra Rau to be Chief Commercial Superintendent.
Mr. A. K. Mullick to be Chief Mechanical Engineer.
Mr. R. Vanchinathan to be Chief Electrical Engineer.
Mr. S. Sen to be Chief Signal Engineer.
Mr. Apiit Singh to be Financial Advisor & Chief Accounts Officer.
Dr. S. S. Kent to be Chief Medical Officer.

Mr. R. J. Hillard, C.M.G., who, as recorded in our April 25 issue, is retiring as General Manager of the Sudan Railways, was born in Durham in 1903 and was educated at St. Paul's School and at Christ Church, Oxford. He was selected for the Sudan Political Service in 1925 and the following year was appointed Assistant District Commissioner, Northern District of Kordofan Province. From 1930 to 1934 Mr. Hillard was Assistant Civil Secretary and between 1932 and 1934 he held an additional appointment as Secretary to the Governor-General's Council.



Mr. R. J. Hillard

General Manager of the Sudan Railways, who is retiring

He became District Commissioner, Northern Gezira District of Blue Nile Province in 1935 and in 1939 was appointed District Commissioner, Omdurman, Khartoum Province. Five years later he went to the War Supply Department as Assistant Controller-General and in 1946 was appointed Assistant Director, Department of Economics & Trade. Shortly afterwards Mr. Hillard became Director, Department of Economics & Trade, and also was appointed President of the Board of Economics & Trade and Managing Director, Trading Division of the Equatorial Projects Board; he became General Manager, Sudan Railways, at the end of 1949. He was a Member of Governor-General's Council from 1946 till it was replaced in 1948 by the Executive Council, and was then appointed to the Executive Council as Councillor without Portfolio and also a Member of the Legislative Assembly. He resigned from the Council and the Assembly last March. Mr. Hillard was one of four Sudan Government observers present at the hearing of the Anglo-Egyptian dispute before the Security Council at Lake Success in 1947. He was awarded the C.M.G. in the King's Birthday Honours List in 1950.

We regret to record the death on May 17, at the age of 64, of Mr. Robert Davidson, C.B.E., a Member of the Docks & Inland Waterways Executive since 1947. He had formerly been General Manager & Engineer of the Leeds & Liverpool Canal Company and Manager of Canal Transport Limited. He was a Vice-President of the Institute of Transport and had been President of the Canal Association.

Mr. Bernard Winterbottom, Managing Director of J. Campbell (Darwen) Ltd., and a Director of Winterbottom & Marshall Limited, has been appointed National Chairman of the Road Haulage Association. The following have been appointed Vice-Chairmen of the Association: Messrs. J. Barrie, John Barrie (Contractor) Limited; R. G. Crowther; R. H. Farmer, Atlas Express Company; J. H. Male, J. Male & Son.

Memorial to Sir Herbert Walker

The memorial to the late Sir Herbert Walker, General Manager of the Southern Railway, 1923-37, and afterwards a Director, which is being placed at the entrance to the general offices opposite No. 21 platform at Waterloo Station, will be unveiled by Mr. John Elliot, Chairman of the Railway Executive, at 11.30 a.m. on Tuesday, May 27. All subscribers to the memorial fund are invited to be present.

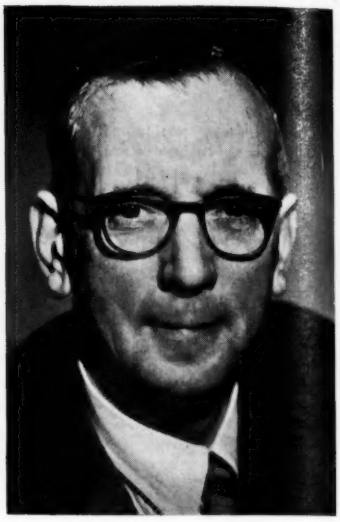
Vickers - Armstrongs Limited has appointed Sir James Reid Young as Chairman, Major-General C. A. L. Dunphie, as Managing Director, Engineering Works & Shipyards, and Mr. E. J. Waddington as Director of Administration. All three were already Directors. Major Sir Hew Kilner will continue as Deputy Chairman & Managing Director, Aviation.

Mr. H. E. A. White

Appointed District Motive Power Superintendent, Neath, Western Region

Lt.-Colonel K. G. Maxwell

Manager, Publicity Department, Metropolitan-Vickers Electrical Co. Ltd., who has retired from executive duties



Mr. E. E. Walker

Appointed Manager, Publicity Department, Metropolitan-Vickers Electrical Co. Ltd.

Mr. H. E. A. White, A.M.I.Mech.E., Assistant District Motive Power Superintendent, Bristol, Western Region, who, as recorded in our May 2 issue, has been appointed District Motive Power Superintendent, Neath, joined the G.W.R. at Swindon as a fitting, turning and erecting apprentice and served 12 years in the Drawing Office. In July, 1939, he was appointed Assistant to the Divisional Locomotive Superintendent at Newton Abbot and in September of that year began war service with the Ordnance Workshop Company of the Territorial Army, obtaining the rank of Lt.-Colonel in 1941. Transferring to the Royal Electrical & Mechanical Engineers, on its formation, he obtained experience with infantry and armoured formations in this country, before being posted to India, where he ultimately became Deputy Director of Mechanical Engineering, Southern Army. Mr. White returned to the railway service in October, 1945, as Assistant to the Locomotive Superintendent at Bristol and in December, 1946, was appointed Assistant Locomotive Superintendent, Bristol, which post was later redesignated Assistant District Motive Power Superintendent. With the reforming of the Territorial Army, after the war, Mr. White commanded a Battalion of the R.E.M.E., with its headquarters at Bristol, and is now on the Reserve holding the rank of Lt.-Colonel.

Mr. F. C. Badhwar, Chairman of the Indian Railway Board, is arriving in this country by air on May 25. He expects to be in Britain until June 4 for discussions in connection with the placing of orders under the Railway Board's 1953-54 rolling stock programme, reference to which is made in our Contracts & Tenders columns.

The following South African Railways appointments have been announced:—

Mr. C. J. H. Schoombie, System Manager, Cape Town, to be Chairman of the South African Railways & Harbours Service Commission, Pretoria.

Mr. H. J. G. Seeliger, System Engineer, Johannesburg, to be Superintendent (Planning), General Manager's Office, Johannesburg.

Lt.-Colonel K. G. Maxwell, M.C., Assoc. M.C.T., M.I.E.E., Manager, Publicity Department, Metropolitan-Vickers Electrical Co. Ltd., who, as recorded in our May 16 issue, has retired from executive duties, but will continue to be available to the company in an advisory capacity, was born in Hobart, Tasmania, and educated at Launceston Grammar School and the University of Tasmania. Following a five-year apprenticeship with Russell Allport & Company of Hobart, he came to England for further education at Manchester College of Technology. In 1911 he joined Metropolitan-Vickers (then the British Westinghouse Company) as Process Engineer in the Transformer Department, but on the outbreak of the 1914-18 war enlisted in the 6th Manchesters, commanding the 2/5 Battalion in Belgium and France during 1917 and 1918. In March, 1919, he returned to Metropolitan-Vickers as head of the Process Section of the Research Department, becoming Assistant to the Manager, then Mr. A. P. M. Fleming, and being instrumental in developing the use of insulation and process specifications. In May, 1933, he was appointed Manager, Publicity Department. During the second world war Colonel Maxwell commanded first the Metropolitan-Vickers Unit of the Home Guard and later the Trafford Park Battalion. He relinquished this duty in 1941, when he was seconded to the Admiralty as Director of Production at the Admiralty Signals Establishment, where he remained until October, 1945. In the 19 years since Colonel Maxwell became Manager, the Metropolitan-Vickers Publicity Department has expanded rapidly. He was keenly interested in the design of the company's products and was the first Chairman of the Manchester Section of the Design and Industries Association. He was Chairman of the B.E.A.M.A. Publicity Committee in 1948-50, and was also Chairman of the A.E.I. Group Publicity Committee in 1934-41 and 1948-52. He joined the Institution of Electrical Engineers in 1909, and in 1925 received, jointly with Mr. A. Monkhouse, the Kelvin Premium for their paper on "Recent Improvements in the Insulation of Electrical Machinery." He has travelled extensively in Europe, America and Australasia on his company's behalf.

Mr. E. E. Walker, M.I.A.M.A., Assistant Manager, Publicity Department, Metropolitan-Vickers Electrical Co. Ltd., who, as recorded in our May 16 issue, has been appointed Manager of that Department, was born in 1890, educated at Aston, near Birmingham, and joined the Aston Works of Electrical & Ordnance Accessories Limited, a subsidiary of Vickers, in 1907. He enlisted in the Royal Engineers in 1914, and served in France and Salonika throughout the first world war. In 1918 he returned to the Sales Department of Electrical & Ordnance Accessories Limited at its new works at Ward End, Birmingham, but in 1920, consequent on the absorption of part of the business by the newly named Metropolitan-Vickers Company, he was transferred to the Motor Sales Department at Trafford Park. In 1921 Mr. Walker began his career in advertising by winning a competition instituted by the then Publicity Manager at Metropolitan-Vickers. As a result he was invited to join the Publicity Department, and from 1922 was in charge of the Press Advertising Section. In 1941, during the temporary absence of the Publicity Manager, Colonel Maxwell, Mr. Walker became Acting Manager of the Publicity Department, and on Colonel Maxwell's return in 1945 he was appointed Assistant Manager. Mr. Walker has been Metropolitan-Vickers representative to the Incorporated Society of British Advertisers for more than 20 years, and in 1944 he read a paper on "The Standardisation of Page Sizes in Technical Journals." Mr. Walker is a member of the Public Relations Committee of the Radio Industry Council.

We regret to record the death of Mr. H. V. Taylor, System Manager, East London, South African Railways.

We regret to record the death on May 17, at the age of 69, of Mr. H. O. Smith C.B.E., Director, Imperial Chemical Industries, Limited.

Mr. Edward Weeds, who retired recently as Assistant, Special Duties, Office of the Purchasing Officer, Hotels Executive, was the recipient of a presentation made by Mr. E. J. Davis, Purchasing Officer (Provisions & General Stores), on May 15.

Beyer, Peacock & Co. Ltd.

Company well equipped for facing the uncertain conditions of the current year

The annual general meeting of Beyer, Peacock & Co. Ltd., was held on May 21 at the Dorchester Hotel, Park Lane, London, W.1, Mr. Harold Wilmot, C.B.E., Chairman and Managing Director, presiding.

The Secretary (Mr. Leslie Thornley Dawes, F.C.W.A.) read the notice convening the meeting and the report of the auditors.

The Chairman's review, which had been circulated with the report and accounts for the year ended December 31, 1951, said that the consolidated balance-sheet revealed an increase in net fixed assets of £94,262 and an excess of current assets over current liabilities of £1,099,171, which was an increase of £214,821 over last year's balance. Revenue reserves had increased from £784,902 to £1,045,239 and capital reserves from £188,480 to £203,893.

The issued and fully paid capital had been increased by £33,333 in respect of ordinary shares issued (at a price of 30s. per share) for the purpose of funding the £50,000 investment of the company in Metropolitan - Vickers — Beyer Peacock Limited.

The consolidated profit and loss account for 1951 showed the group profit, before tax, as £504,738 for that year, an increase over the previous year of £100,829. After taxation the combined net profit for the year was £238,065, an increase of £42,624 over the 1950 figure. This increase in profit was a reflection of higher total sales throughout the group.

New Acquisition

In October, 1951, negotiations were started for the acquisition of further production facilities made necessary by additions to the company's range of products and the generally expanding order books of their group. These negotiations led to the purchase for £160,000 of the freehold land (approximately 30 acres), buildings, plant, machinery, motor vehicles, patterns, tools, dies and accessories, stocks of materials, spare parts, and work in progress, drawings, designs, and records of Dening & Co. (1937) Ltd. A new company called Denings of Chard Limited was formed as a wholly-owned subsidiary of Richard Garrett Engineering Works, Limited, and this new company took over all the assets above described. The directors confidently expected this acquisition to prove an added source of strength to the group as a whole. In the meantime funds for the purchase and for financing development had been found from their liquid resources.

Shortages Restrict Trade Expansion

The order books of the group stood at new record high levels and the only factors precluding considerable further expansion in productivity were shortages of skilled labour and the rationing of essential materials. Most of the company's products and their market were in categories officially described as carrying a high rating in the fields of essentiality. It should, therefore, be logical to expect little, if any, reduction in the volume of material supplies.

Deliveries from the Bowesfield works of Metropolitan - Vickers—Beyer Peacock Limited had commenced. The difficulties of building up a satisfactory production rate in a new factory under present conditions were very real. The speed of progress must necessarily depend on how quickly it proved possible to secure both labour and materials on an adequate scale.

At the last annual general meeting a request was made that the board should consider and if possible arrange for an interim dividend. An interim dividend—the first in the company's history—of 4 per cent. gross was therefore paid on the ordinary shares in February last. The directors hoped that this was of some practical convenience to shareholders.

The Current Year

In the Chairman's opinion the results for 1951 were gratifying. It would be folly to attempt a forecast in respect of 1952 without some warning that production problems were perhaps more serious and intractable than at any time in recent history. This group of companies was fortunate in possessing a competent executive and a large band of skilled craftsmen. Their products did not suffer by comparison with those of their competitors, which might account for their record order books at fair prices. Their factories were well equipped and finances were sufficient for immediate needs. Given adequate supplies of materials and no serious economic disturbance, the results for 1952 should be reasonable. Steel supplies in the first quarter were disappointing, but had subsequently improved.

The report and accounts were adopted and the proposed final dividend of 3½ per cent., plus a bonus of 2½ per cent., making 10 per cent., less tax, for the year, were approved.

The retiring director, Mr. Henry Robertson, D.L., J.P., was re-elected, and the remuneration of the auditors, Messrs. Price Waterhouse & Company having been arranged, the proceedings terminated.

Stranraer-Larne Service Improved

The Scottish Region announces that the daylight service to Ireland *via* Stranraer and Larne during 1952 will operate daily, except Sundays, from June 20 until September 6 inclusive. Departure from Stranraer Harbour is at 6.15 p.m. The connecting train from Glasgow, St. Enoch, leaves at 2.50 p.m.; the steamer arrives at Larne at 8.35 p.m., and Belfast York Road, is reached at 9.20 p.m. By this service, Bangor, Newcastle, Portrush, and other holiday resorts can be reached the same night.

The mail steamer from Stranraer will continue to leave at 7 a.m., in connection with the 8.45 p.m. train from Glasgow St. Enoch. The *Princess Margaret*, which maintains the mail sailings, recently resumed service after reconditioning and conversion from coal to oil burning. It was built specially for the Stranraer—Larne mail service in 1931; reconditioning was carried out on the Clyde at the Meadowside Yard of D. & W. Henderson & Co. Ltd., of Glasgow.

Alterations to "Princess Margaret"

The boilers of the *Princess Margaret* have been converted from coal to oil burning. The boiler installation consists of four Babcock & Wilcox water tube boilers, which have been fitted with the Clyde low pressure system of oil burning, allowing of fuelling without disturbance to passengers.

Among major improvements to passenger accommodation is the conversion of the former observation lounge on the boat deck forward to a first class smoke room. The former smoke room on the boat deck aft has been completely remodelled as the first class dining saloon. On the bridge deck, the former first class dining saloon is now the third class dining saloon.

In the third class general lounge on the main deck aft, a new tea bar has been fitted at the starboard side. Additional third class cabins have been provided in place of open berths.

Steamer Reservation tickets (formerly known as sailing tickets) will be required for the sailings from Stranraer Harbour on July 18 and 19 (Glasgow Fair Holidays) and from Larne Harbour on August 1 and 2.

For the first time since 1939, special day excursion tickets are available to Larne, Belfast, and Portrush; they are issued at Glasgow, Paisley, and other stations in connection with the morning mail service from Stranraer. Passengers return from Portrush at 3.50 and Belfast at 5.50 p.m. to join the 6.50 p.m. sailing from Larne.

The Jubilee of the Albula Tunnel

The fiftieth anniversary of the meeting of the advance headings of the 3¾-mile Albula Tunnel on the metre - gauge Rhaetian Railway in the Swiss canton of the Grisons, occurs on May 29. Fifty years ago the boring of Alpine tunnels was still a notable event. Construction of the Albula Tunnel began in the summer of 1899.

Although the geological forecasts were to a great extent confirmed there were many unpleasant surprises and almost insuperable obstacles made progress extremely difficult. On the south side the work was delayed for some time by a landslide. On the north side, water broke in, making continuation of the work almost impossible. In one part on soft rock the gangs advanced only 21 ft. in 2½ months. On solid rock of about three miles the work progressed far better. Here it was possible to work on both sides at the same time with three hydraulic Brandt-type rock-boring machines.

The greatest progress made in one day on both sides was 26 ft. A block of granite punctured by peculiar honeycomb-like holes, which now lies at the tunnel portal near Preda Station, was used to test the drills after they had been sharpened. Nearby stands a stone slab in memory of the victims which the work claimed. This slab itself was responsible for two deaths. It became loosened from the roof of the tunnel while men were at work, killing two as it fell. The building of the tunnel caused altogether 16 deaths.

Between 500 and 600 men worked in shifts alternately at both ends of the tunnel. The maximum was reached in July, 1902,

when 1,316 were at work. The tunnel cost fr. 7,183,000, or fr. 410 a foot. The meeting of the axis of the advance headings from north and south proved to be only 2 in. out of alignment.

Gradients in Tunnel

The northern portal of the tunnel at Preda Station is 5,879 ft., the southern portal, at Spinas Station, 5,964 ft., and the centre is 5,998 ft. above sea level. Although the tunnel is dead straight it is not possible to see through it as the line rises slightly from each portal to the centre. Since electrification the tunnel is no longer filled with smoke and it has become possible to see from the centre the portal on both sides as a small bright dot. The centre is reached by train in about three minutes today, instead of five minutes with steam traction in 1903.

The piercing of the Albula Tunnel and the opening of the Albula route on July 1, 1903, was of the greatest significance for the Engadine, which was thenceforward linked by rail with the rest of Europe. Before, it could be reached only by a toilsome journey of many hours across mountains which were often dangerous in winter.

AMBULANCE COMPETITION FINALS.—The finals of the British Railways and London Transport (Railways) and the British Transport Commission Police First Aid Competitions were held at the Central Hall, Westminster, on May 16. Thirteen teams competed in the men's section of the British Railways and London Transport (Railways) competition. Bristol D.O.S.O. team was first with 495½ points out of 600, followed by Exmouth Junction No. 1 with 466½ points. In the women's section, contested by six teams from the Regions and one from London Transport, the London Transport (Broadway) team gained 435½ points, winning the event from the Brighton team with a lead of 28 points. Liverpool Street (London Area) took first place in the British Transport Police Competition, with 436½ points, the runners-up from the six competing teams being Preston (Midland Area) with 414½ points. The challenge trophies and plaques were presented to the winning teams by Lord Hurcomb, Chairman, British Transport Commission.

More Camping Coaches for Summer Holidays

Conversion of 89 vehicles at British Railways works

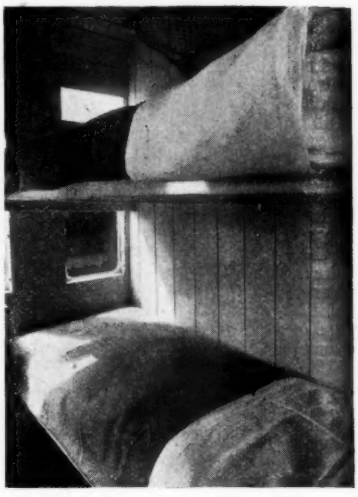
All Regions of British Railways will offer camping coach accommodation to holidaymakers this summer. Since the war until this year, camping coaches have been available only on the Southern Region, but a programme of converting 89 vehicles is now well in hand and will enable coaches to be sited in attractive holiday areas in East Anglia, North Wales, the Peak District, the West Country, the South of England, Yorkshire Coast and Dales, and in Scotland. The volume of bookings received already shows the popularity of these facilities.

Works Engaged on Conversions

Conversion of coaches is being carried out in the following railway workshops (numbers of vehicles dealt with at each in brackets): Doncaster (10), Derby and Wolverton (24), York (15), St. Rollox (10), and Swindon (30). No new steel is required for the conversions. The coaches accommodate 6 to 8 people. Each is completely equipped with sheets, pillows, blankets, cutlery, crockery, linen, kitchen utensils, and everything needed for cooking. The bunk beds are well sprung and fitted with hair mattresses.

Specimen coaches of the Western and Eastern Region were on view at Marylebone on May 15. The Western Region coach is arranged for eight berths divided between two two-berth cabins and one for four berths. If required a berth from the four-berth cabin can be transferred into one of the other cabins. A cloakroom with wash basin is provided at one end of the coach, adjacent to the sleeping accommodation, and the other half of the coach is divided to form a living room and kitchen. Cooking and lighting are by oil.

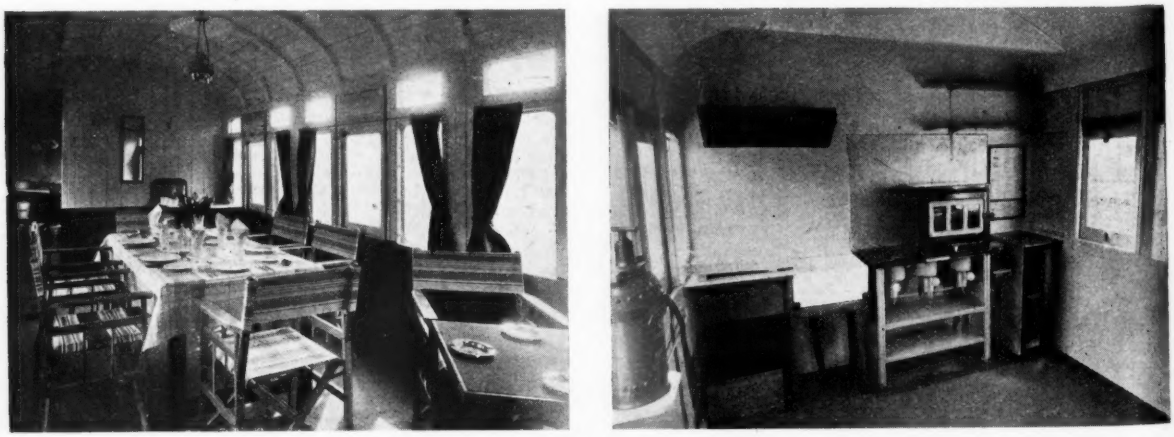
The Eastern Region coach has six berths in three two-berth compartments, each of which has its own washbasin. Cooking in this vehicle is by Calor gas, but oil lamps provide the lighting as in the W.R. vehicles. In both coaches there is adequate and convenient cupboard space, the kitchens compare favourably in roominess with those in many suburban houses, and the general appointments throughout form an attractive setting for a family's holiday quarters. All necessary equipment, including cutlery and linen, is provided. Luggage sent in advance is delivered direct to the coach.



Upper and lower berths in a Western Region camping coach

Rates and Conditions of Hire

Every effort is being made to have all the coaches available in time for the holiday season. There are already 24 coaches available in the Southern Region. Applications for renting should be addressed to the Commercial Superintendent, British Railways, of the Region concerned. Rates vary from £5 5s. to £10 a week according to site and season. The only condition made by British Railways in the letting of the coaches is that the tenants shall purchase in advance not less than four adult return rail tickets to the nearest station for the smaller type of coach and six tickets for the 8-berth coaches.



Living room of Western Region coach (left); and kitchen of Eastern Region coach (right). A Calor gas cylinder for supplying the cooker is seen in the left foreground of the right-hand picture

Parliamentary Notes

House of Lords Debate on Transport

Discussion on implementing the proposals outlined in the recent White Paper

The House of Lords on May 15 discussed the Transport Policy of the Government, as set forth in the recent White Paper.

Lord Lucas of Chilworth, Parliamentary Secretary to the Ministry of Transport in the Labour Government, who initiated the debate, said that the policy, if policy it could be called, set out in the White Paper, was the complete overthrow of any thought of integrating, unifying, or amalgamating the rail and long-distance road haulage system of this country. The Government's policy, set out quite clearly, was to return to the bitter and intense warfare of the past between road and rail, hoping that in time and from the strife there would emerge something of a policy which would save the trouble of thinking about one. The policy set out in the White Paper threw overboard all the opinions expressed and all the advice given for years by anyone who had any right to be classed as an authority on transport, including a long succession of Committees and Royal Commissions, and an even longer succession of Conservative Ministers of Transport, including Lord Leathers.

The facts would show that the great necessity, and the great factor, in the economic running of the railways of this country today was the feeder services. Whoever controlled the road feeder services to the railways controlled the bridgehead to a large section of railway economy, and therefore railway profitability.

Referring to the four paragraphs in the White Paper dealing with railways, Lord Lucas said he had no objection to decentralising if it proved to be right, but he could not understand how it was going to work. The plan was not really reviving competition between road and rail. It was reviving competition, or setting up competition now between a private enterprise service with no restrictions at all except those under the 1933 Road and Rail Act and a nationalised service which had all the statutory responsibilities upon it.

Lord Beveridge asked if the 11,000 odd vehicles which formerly belonged to the railways and which passed, presumably, to the Road Haulage Executive, were to be included in the sale back to private enterprise. If they were to be included, then it was clear that the railways would lose what they had always in the past regarded as essential feeders to the railway system. He suggested the appointment of a Royal Commission, with instructions to report in six months or eight months, as to what was really needed in transport.

Lord Leathers (Secretary of State for the Co-ordination of Transport, Fuel & Power) said that in spite of all that had been said so far, the Government were firmly convinced that they had produced in the White Paper a sound scheme. They believed that it was in the best interests of inland transport, and of trade and industry, and that it made a positive contribution to the solution of the transport problem which had vexed the country over the past 30 or 40 years. He made no complaint about the way in which those responsible for carrying out the Transport Act of 1947 had done their duty. In the face of great obstacles they had done their best to make the thing work.

But the evils of the Act had been too much for them. The centralised control of the railways had brought some benefits. But, on the other hand, it had led to too much uniformity and had destroyed much of the initiative and enterprise and, indeed, pride of service which formerly existed under the old great names. In road haulage the disadvantages of over-centralisation had been even more marked. It had led to no public advantage, and the customer had been served less well. At the same time it had dispossessed thousands of small hauliers up and down the country and brought much hardship.

No public corporation could keep under control a job of the magnitude entrusted to the Commission by the Act. Without further inquiry it was clear enough that small and medium sized individual businesses were an essential element in road haulage if it was to give the best service of which it was capable. The Government proposals were based on the conviction that success could best be achieved by allowing private enterprise a greater part.

Less Centralisation for Railways

It was not proposed to denationalise, but to reduce the excessive centralisation of the railways. For that purpose, the Commission would be asked to prepare a scheme for the Minister's approval. That scheme would deal with such matters as the areas into which the railways were to be divided for management and operation; and with their constitution and their relation to the Commission, and the functions of those in charge of the areas. Areas would have a greater measure of independence than the present regions, but it was clear that the railways would still have to be treated as a whole for some purposes such as finance and charges. Scotland would be a separate area.

In the matter of charges, the railways had of recent years suffered from the lengthy procedure which had to be followed when rising costs made it necessary for charges to be raised. Indeed, part of the accumulated deficit of the British Transport Commission could be ascribed to that fact. The Government certainly hoped that no further increases would be necessary. But if they were, they proposed a speedier procedure which, while still protecting the public, would enable the railways to gain more quickly the revenue needed to meet increased costs. Moreover, it was their intention that the railways should be freed from certain restrictions fettering their right to lower charges. Subject to reasonable safeguards, they would have power to adjust individual charges or groups of charges downwards to meet the competition of the more stimulating conditions for which they planned.

The proposed levy must be seen as part and parcel of a practical plan providing for working arrangements between road and rail. They were giving the road greater freedom in the knowledge that that was often the cheaper and more convenient form of transport, and in the conviction that trade and industry would thus benefit. But if road was allowed to expand at the expense of rail, the railways should be able to make corresponding economies. If those economies were fully compensating, well and good; but it was more than likely that the railways would be faced with an unavoidable loss of net revenue by having to maintain assets essential for other purposes but not being used to the full. Unless some other arrangement was made, the railways would have to make good any such loss by raising their charges on the rest of their traffic. The Government proposed, therefore, that there should be a levy on road goods transport. The levy, as was stated in the White Paper and as it was most important for everyone to realise, was limited in its application to two purposes—and two only. The first was to enable the Commission to liquidate any capital loss it might sustain in the sale of its road haulage undertakings, including the cost of sale. The second purpose of the levy was to enable the Commission to meet any net loss incurred by the railways owing to the transfer of traffic from rail to road arising out of the new plan. It could not be too strongly emphasised that the second element in the levy had a strictly limited purpose. It would operate only where there was a definite transfer of traffic from rail to road, and then only to the extent that the consequent loss of revenue to the railways could not be offset by compensating economies. Any reduction in railway net revenue due to other causes would not be reflected in the levy. He was sure that it would be a matter of pride to railwaymen to make every possible effort to avoid having to make any use of that second part of the levy.

Deciding Amount of Levy

The amount of the levy would be decided from time to time, probably at intervals of three years, by the Minister of Transport, after obtaining the advice of the Transport Tribunal. It would be fixed for the initial period at a figure of about £4,000,000 a year, which represented no more than a very small fraction of a penny per ton-mile. Moreover, when spread over more than half a million vehicles, as it would be, it was seen then in true perspective. That £4 million was something quite different from a tax, and was specifically designed to enable the road haulage industry to come back into business and to enjoy greater freedom without treating the railways unfairly.

They did not work out Government policy with the Commission. It must be for the Government to formulate the broad lines of policy in that as in any other field. The function of the Commission was to carry out the duties assigned to them by the Transport Act, and it would have been unrealistic to expect the Commission to be able to take a completely dispassionate view of proposals which so deeply affected their structure and functions. They were, of course, being consulted about the practical application of the principles embodied in the White Paper, particularly in the matter of future organisation.

In some shape or form there would have to remain, it seemed to him, a central body to whom the Area railway boards

could be responsible in such matters as finance and charges. That body would also weld together the financial results of the London Transport Executive and the various bus companies in which the Commission held a share, the docks and inland waterways and the hotel and restaurant services.

In course of further discussion, Lord Winster said he did not think it impossible that the railways should pay their way. In the course of their existence the Railway Executive effected many great economies, and he believed were on the way to effect yet more. He was astonished by the system under which it was sought to promote competition between railway services while demanding of the road that it should subsidise its competitor, the railway.

Viscount Ridley asked if there were not many things in railway legislation which really called for reconsideration. He referred to the restrictions which had been placed on the railways for many years. There was the question of the obligation to carry, the question of limitation and variation of charges, liability not to give undue preference, and so on. There was a Transport Tribunal which, although it was in a new form in the present Act, was a descendant of the earlier organisation which was instituted in earlier times. Conditions had changed so much that it would be well worth thinking again how to arrive at a more satisfactory situation.

Viscount Swinton (Chancellor of the Duchy of Lancaster), winding up for the Government, said it would be unreasonable to expect every detail of decentralisation and improved management to be given in the White Paper or even in the Bill. Finance certainly had to be decentralised. He believed that by decentralisation they would see a good deal more making of money from the railways. He had been asked whether every lorry belonging to the railways was to be sold. As he understood it, the answer to that was "no; that those lorries which are essential feeders of the railway services will be retained by the railways." Several speakers had referred to the importance of giving greater latitude to the railways in their charges. He was sure that was right. He was much more interested in latitude being given to the railways to enable them to put their charges down rather than put their charges up. He was sure there was a great deal they could do if they were given the chance.

The Opposition motion for Papers was, by leave, withdrawn, and the debate concluded.

Questions in Parliament

Fare Increases

Sir Herbert Williams (East Croydon—Con.) on May 19 asked the Minister of Transport when he hoped to announce the modification of fares and omnibus stages in the London Transport Area.

Captain Robert Ryder (Merton and Morden—Con.) also asked the Minister of Transport, if he was now in a position to state what action he was taking in regard to the hardship caused by the recent increase in London fares.

Mr. A. T. Lennox-Boyd wrote in reply: I have now received from the British Transport Commission their proposals for modification of certain fare increases. These are now under urgent examination. As soon as I can make an announcement I will do so.

Lieutenant-Colonel Marcus Lipton (Brixton—Lab.) on May 19 asked the Minister of Transport how much additional revenue had been received, to date, as a result of the recent fare increases in London.

Mr. A. T. Lennox-Boyd wrote in reply: The British Transport Commission tell me that, whilst the amount cannot be precisely calculated, it is estimated that the additional revenue received from the increases in fares in the London area in the eleven weeks from March 2 to May 17 amounted to about £2·5 million.

Transport Policy

Lt.-Colonel Marcus Lipton (Brixton—Lab.) on May 13 asked the Prime Minister what other Ministers, besides the Minister of Transport, would be deputed to discuss with the B.T.C. the carrying out of the policy set out in the White Paper.

Mr. Winston Churchill: Consultation with the B.T.C. is naturally within the province of the Secretary of State for the Co-ordination of Transport, Fuel & Power, as well as part of the duties of the Minister of Transport.

Mr. Ernest Davies (East Enfield—Lab.): As neither of the Ministers concerned consulted the Commission before the proposals were incorporated in the White Paper, and as the proposals have not been adopted by the House, will Mr. Churchill give an assurance that no commitments will be entered into until the proposals have received the consent of the House?

Mr. Churchill refused to give the assurance.

Discussions with British Transport Commission

Mr. A. J. Sparks (Acton—Lab.) on May 19 asked the Minister of Transport if he had yet consulted with the British Transport Commission as to the conduct of their undertaking in the interim period prior to legislation, and with what result.

Mr. A. T. Lennox-Boyd wrote in reply: I have invited the Commission to meet me this week to discuss this question.

Administration of Railways

Mr. A. J. Sparks (Acton—Lab.) on May 19 asked the Minister of Transport if he would state the main factors upon which he based his declaration in the White Paper on Transport Policy that the railways had become excessively centralised under the Transport Act, 1947.

Mr. A. T. Lennox-Boyd wrote in reply: The main grounds for the Government's conclusion that the administration of the railways has become excessively centralised under the Transport Act, 1947, are the extent of the functions vested in the Railway Executive by the scheme of delegation made by the British Transport Commission under Section 5 of that Act, and the distribution of functions between the Railway Executive and its Chief Regional Officers. I shall hope to deal with these matters in the forthcoming debate.

Transport Commission Annual Report

Mr. David Jones (Hartlepools—Lab.) on May 19 asked the Minister of Transport, when the 1951 Annual Report of the British Transport Commission would be available for consideration by Members.

Mr. A. T. Lennox-Boyd: The Commission hope that the report will be available in the early part of July.

British Road Service Vehicles

Mr. J. A. Sparks (Acton—Lab.) on May 19 asked the Minister of Transport, what safeguards were to be afforded the staff of the Road Haulage Executive consequent upon the disposal by public auction of British Road Services vehicles.

Mr. A. T. Lennox-Boyd wrote in reply: I assure Mr. Sparks that the interests of the staff of the Road Haulage Executive will be kept fully in mind when legislation to give effect to the proposals in the White Paper on Transport policy is being prepared.

Road Haulage Investments

Mr. Cyril Osborne (Louth—Con.) on May 19 asked the Minister of Transport, if, in his coming legislation, he would make a special offer to the National Union of Railwaymen to accept some of their reserve funds for investment in road haulage on preferential terms.

Mr. A. T. Lennox-Boyd wrote in reply: No. This is an interesting idea—but I am afraid it cannot be done.

Staff & Labour Matters

Railwaymen's Wage Claim

The Railway Executive has received claims from the three railway trade unions for a 10 per cent. increase in rates of pay and for all time worked between 12 noon and 12 midnight on Saturdays to be paid for at time-and-a-half in substitution for the flat rate payments which were introduced by the Railway Staff National Tribunal under its Decision No. 13 dated November 7, 1951. Similar applications have been received by the London Transport, Docks & Inland Waterways and the Hotels Executives.

Full support for the wage claim was given at the annual conference of the Transport Salaried Staffs Association at Folkestone last week. A proposal was turned down that a decision on the claim should be obtained by June 30, but it was agreed that in connection with all future wage claims there should be consultation not only with the other railway unions but with all the unions dealing with the British Transport Commission.

The claim is being discussed at a meeting between representatives of the Railway Executive and the Unions today, May 23.

T.S.S.A. Conference

Dealing with the Government's transport policy at the association's annual conference, Mr. Percy Morris, M.P., President of the Transport Salaried Staffs Association, said that in its White Paper on denationalisation the Government has not made the slightest reference to the staff and there was no provision for their protection. Mr. Morris was introducing his Executive's resolution which drew attention to the way the Government's decision had been taken without consultation with either the British Transport Commission or the unions. He told the conference that the next Labour Government would renationalise road haulage and it was the considered view that when this came about there should be no compensation paid for a second time. The conference agreed that the association should meet other unions with a view to forming a united front against the Tory transport threat. It also urged that the Labour Party should declare its intention to renationalise the road transport industry.

A resolution was carried at the conference instructing the Association's Executive Committee to open negotiations for three weeks' annual leave for clerical and supervisory staffs with up to fifteen years' service, and four week's leave for those with more than fifteen years' service, reliefs to be provided to ensure that

there should be no arrears of work for those returning from holiday.

Another resolution seeks provision for 30-min. reliefs for meal breaks, or alternatively, overtime pay. Control-room staff and telephonists were quoted as examples of staff working without having a meal break.

Chancellor on Wage Demands

The Chancellor of the Exchequer addressed a special meeting of the National Joint Advisory Council, at which the Minister of Labour presided, on May 15, on the dangers of inflation if new wage demands were pressed by the trade unions. He said that what was called the wage-spiral was one of the greatest dangers to our national economic health. Wage demands were being made which were far greater than anything known in recent years, and if granted would decisively defeat all the efforts to get some stability in the cost of living.

The Chancellor also contended that the rise in prices which started about two years ago had been largely compensated for by wage increases obtained up to the early part of this year, and there was no justification for the further claims now being made.

The various bodies represented on the National Joint Advisory Council undertook to consider the views which the Chancellor put forward.

Traders' Traffic Conference Edinburgh Congress

About 90 members and guests assembled at the North British Hotel, Edinburgh, on May 12 for the Traders' Traffic Conference 1952 Congress. The following day the Conference were the guests of Thos. W. Ward Limited, on a coach tour to Aberdour, and afterwards to Inverkeithing Yard.

The Congress dinner was held at the North British Hotel. The toast of "The City of Edinburgh" was proposed by Mr. W. R. Clark Lewis, Transport Manager, Babcock & Wilcox Limited, and responded to by Baillie J. B. Mackenzie, in the absence of the Lord Provost. The toast "Our Visitors" was proposed by Mr. H. R. Caulfield-Giles, the Conference Chairman, and responded to by Mr. James Bussey, Director, Thos. W. Ward Limited, and Major F. S. Eastwood, Regional Traffic Commissioner of the Yorkshire Area.

The Chairman said the Government White Paper had been hastily conceived and would not suit traders anywhere. Some means must be found of taking transport away from politics and having it dealt with as a commercial affair. The suggestion that there should be decentralisation on the railways was good within limits, as also was the granting of more freedom to vary their charges. Integration had gone, but there could be no success when one arm of transport was fettered and the other free. Competition between nationalised road transport and private enterprise could work, and he thought that it would quickly be seen which of the two was the more efficient and economic.

The Conference had its usual monthly business meeting on May 14, and members were the guests at lunch of the Distillers' Agency, they afterwards went over the new blending plant situated at South Queensferry.

Contracts & Tenders

The order for 20 underframes and bogies for third class carriages, which, as recorded in our December 7, 1951, issue, has been placed with the Metropolitan-Cammell Carriage & Wagon Co. Ltd. by the Crown Agents for the Colonies, has been increased to 45. The underframes are for the Ceylon Government Railway.

The following contracts have been placed by British Railways, London Midland Region :—

Henry Hope & Sons Ltd., Smethwick, Birmingham : renewal of roof coverings with patent glazing at Blackburn Station.

Robertson Building Service, H. H. Robertson Company, Ellesmere Port, Wirral : renewal of roof coverings with Robertson protected metal sheeting at Blackburn Station and renewal of roof coverings with the same material at Rugby Midland Station north end.

W. Bush & Son Ltd., Alfreton : removal of the track and superstructure of bridge No. 11 and telegraph pole line, Pilling to Knott End section of the Knott End branch.

Leonard Fairclough Limited, Adlington : provision of sidings, earthworks, drainage, fencing and ash ballasting at Hartford Junction, Wallerscote.

The Board of Trade, Special Register Information Service, recently reported that the Directorate General of Supplies & Disposals, Government of India, New Delhi, has issued a call for tenders for the supply of quantities of 20 types of laminated bearing springs for the Assam Railway at Calcutta. The closing date for tenders is June 9. A copy of the tender documents is available at the Board of Trade, Commercial Relations & Exports Department, for inspection by representatives of United Kingdom firms.

Under its 1953-54 rolling stock programme, the Indian Railway Board is calling for tenders for the following equipment:—

Broad Gauge

80 "WG" goods locomotives.
Ten "WT" passenger tank locomotives.
Ten diesel shunting locomotives.
22 "XA" class locomotive boilers.
25 "XB" class locomotive boilers.
14 "XD" class locomotive boilers.
20 "XE" class locomotive boilers.
Eight "DS" class locomotive boilers.
32 "HSM" class locomotive boilers.
100 bogie hopper wagons, with centre discharge.
Ten four-wheel tank wagons for carrying liquid chlorine.
500 68 ft. bogie carriage underframes, without wheels and axles.
30 27 ft. 6 in. four-wheel carriage underframes without wheels and axles.
4,860 complete wheel sets, 16 ton axles, for carriage and wagon stock.

Metre Gauge

Ten diesel locomotives for passenger and goods services.
11 "P" class locomotive boilers.
200 all-metal third and inter class carriage body shells on standard 56 ft. 6 in. bogie underframes.
2,000 four-wheel covered wagons, without wheels and axles.
1,000 four-wheel open wagons, without wheels and axles.
300 bogie open wagons, without wheels and axles.
120 bogie petrol tank wagons, without wheels and axles.
75 bogie hopper wagons, with side discharge and without wheels and axles.
150 four-wheel goods brakevans, without woodwork and wheels and axles.
1,240 complete wheel sets, 10 ton axles, for bogie coach underframes.
11,300 complete wheel sets, 12 ton axles, for wagons.
Three steam-operated self-propelling breakdown cranes.
26 steam-operated self-propelling transportation travelling cranes for general purpose service.

2 ft. 6 in. Gauge

Ten "ZE" goods locomotives.
Five "ZP" passenger locomotives.
44 bogie open wagons.
12 bogie rail and timber trucks.
28 bogie hopper wagons, with centre discharge.
20 four-wheel goods brakevans.
50 34 ft. 6 in. bogie carriage underframes.
Six steam-operated self-propelling transportation travelling cranes for general purpose service.

Quotations should be submitted by July 8, 1952, and be addressed to the Railway Board, c/o the High Commissioner for India, India House, Aldwych, London, W.C.2. Manufacturers in the United Kingdom, Europe and North America can obtain further details from the India Store Department, London. The Chairman of the Railway Board will be in London between May 26 and June 4 for discussion with manufacturers and for clarification of any points that may require elucidation.

Notes and News

Institution of Civil Engineers.—The annual general meeting of the Institution of Civil Engineers, Great George Street, S.W.1, will be held at 5.30 p.m. on Tuesday, June 10.

Crown Agents for the Colonies.—Applications are invited for the post of production engineer required by the Nigerian Government Railway for one tour of 18 to 24 months. See Official Notices on page 587.

Locomotive Foreman Required.—Applications are invited for the post of locomotive foreman, between 25 and 38 years of age, required by the Sudan Railways for service in the Sudan. See Official Notices on page 587.

Vacancy for Chief Mechanical Design Engineer.—Applications are invited for the post of chief mechanical design engineer required by company manufacturing diesel-electric locomotives. See Official Notices on page 587.

Steel Company of Wales Limited.—An interim dividend of 1¼ per cent. less tax has been declared in respect of 1951-52. For the year ended September 29, 1951, a dividend of 1·5014 per cent. was paid for the period October 1, 1950, to February 14, 1951, and a similar payment was made for the second half of the year.

Berlin Rail Traffic.—It is reported from Berlin that on May 10 the State Railways in Eastern Germany announced a summer schedule which in effect eliminates West Berlin from the East German Railway system. Goods trains will skirt the western sectors by using a new line completed last summer. Passengers for West Berlin will have to alight at suburban stations on the perimeter of East Berlin, and take local trains into the city. Removal of railway traffic from West Berlin stations may also increase unemployment among West Berlin railwaymen. Four

months ago 2,000 railwaymen became unemployed when Eastern Germany ceased using West Berlin repair depots for maintenance of locomotives.

Antofagasta (Chili) & Bolivia Railway Co. Ltd.—A dividend of 2½ per cent. less tax is being paid on May 23 to holders registered on May 9 on account of arrears on the £2,000,000 of 5 per cent. cumulative preference stock. A similar payment was made last February in respect of the six months to December 31, 1942.

April Iron and Steel Production.—The British Iron & Steel Federation states that production in April was affected by the Easter holidays, which fell in March last year. The output of steel was at the annual rate of 15,866,000 tons, compared with 16,648,000 tons in March, 1952, and 16,771,000 tons in April, 1951. Pig iron production was at an annual rate of 10,472,000 tons in April, compared with 10,490,000 tons in March, 1952, and 9,280,000 tons a year ago.

Holiday Runabout Tickets in North Eastern Region.—Holiday runabout tickets are again on sale in ten areas of the North Eastern Region. One area of 379 route-miles covering Keighley, Halifax, Huddersfield, Bradford, Leeds, Wakefield, Pontefract, York, Scarborough, and Bridlington may be traversed for seven days, beginning any day of the week, at a cost of 35s. Some tickets cost only 20s. Last summer the Region sold 50,969 holiday runabout tickets, bringing in £48,726.

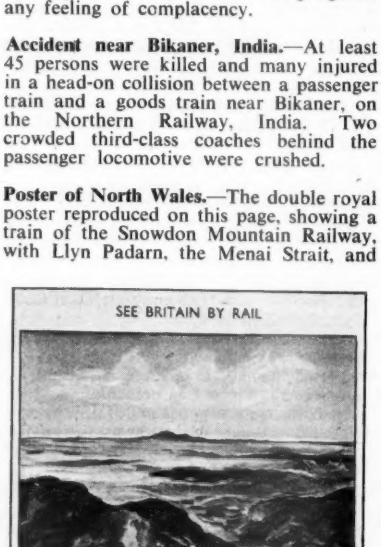
Kingsway Subway.—Mr. Gurney Braithwaite, Parliamentary Secretary to the Ministry of Transport, stated recently in reply to a question in the House of Commons that consideration was being given to using the Kingsway subway to facilitate through road traffic from north to south London by construction of an exit from the subway which would emerge on the northern end of Waterloo Bridge, thus bypassing the bottleneck in the Strand. The tramway service through the subway was withdrawn on April 5.

Restoration of Sunday Services on N.E. Region Branches.—Sunday services have been restored on the Hull-Hornsea and Hull-Withernsea branches of the North Eastern Region as from Sunday, May 11. The first train to Withernsea leaves Hull at 9.5 a.m., followed by five other services, up to 7.5 p.m. From Withernsea the first departure is at 10.17 a.m., and the last of the six trains in that direction leaves at 10.35 p.m. From Hull to Hornsea there are five trains between 9.15 a.m. and 7.10 p.m., and the same number in the return direction between 10.20 a.m. and 10.10 p.m.

International Machine Tool Exhibition.—The International Machine Tool Exhibition, organised by the Machine Tool Trades' Association, will be held at Olympia, London, from September 17 to October 4. The Association held a pre-exhibition dinner at the Savoy Hotel, London, on May 14, when Mr. Robert W. Asquith, the President, was in the chair. Mr. Asquith, who is also Chairman of the Exhibition Committee, outlined the object of the exhibition, and said that the machine tool industry was vital to the economy of this country, and every effort had been made and was being made to increase production for defence requirements; normal replacement of machine tools in the engineering industry; and for export, despite shortage of skilled labour and steel. Sir Greville Maginness, Chairman & Managing Director, Churchill Machine Tool Co. Ltd., and former President of the Association, referred to the position obtaining in the machine tool industry, and sounded a warning against any feeling of complacency.

Accident near Bikaner, India.—At least 45 persons were killed and many injured in a head-on collision between a passenger train and a goods train near Bikaner, on the Northern Railway, India. Two crowded third-class coaches behind the passenger locomotive were crushed.

Poster of North Wales.—The double royal poster reproduced on this page, showing a train of the Snowdon Mountain Railway, with Llyn Padarn, the Menai Strait, and


SEE BRITAIN BY RAIL
NORTH WALES
A view from Snowdon, showing the only mountain rack railway in Great Britain, with Llyn Padarn, the Menai Strait and the Irish Sea beyond

The Snowdon rack railway featured in a British Railways poster advertising the holiday districts of North Wales

Anglesey in the background, is one of three advertising North Wales, and produced recently by the London Midland Region. The other two depict the beach at Rhyl and four "ace" attractions of Llandudno.

B.R. Coal, Iron and Steel Carryings.—British Railways cleared 288,680 tons of coal from deep-mined pits and opencast sites during the weekend up to 6 a.m. on May 19, making the total for the week 3,208,710 tons. This was a slight increase over the previous week in both cases. The latest iron and steel figures show that 206,083 tons were conveyed from the principal steelworks during week ended May 10.

American Railways Seek Approval for Fare Increase.—Nine Western United States railways have asked the Government to approve a 10 per cent. increase in their passenger fares. The petition, filed with the Inter-state Commerce Commission, dealt only with inter-state travel west of the Mississippi. The proposed increases would raise the basic fare per mile from 2·5 cents to 2·75 cents and the sleeping and parlour car fare from 3·5 cents to 3·85 cents. In addition, the nine railways sought authority to increase their minimum single ticket charge from 15 to 20 cents. They said they were operating passenger services at a loss and that operating costs were going up.

Lightalloys Limited.—The Directors of Lightalloys Limited have declared an interim dividend of 3d. per share, less tax at 9s. 6d. in the £ (same), payable on June 6, 1952, to all registered holders at the close of business on May 12, 1952.

London Midland Region Extra Whitsun Trains.—Between May 29 and June 4 inclusive the London Midland Region will run 887 extra main line trains. There will be 59 extra trains from Euston and 36 from St. Pancras to the Midlands, the North and Scotland. From these areas there will be 59 extra trains into Euston and 41 into St. Pancras.

Swiss-built Locomotives for Indian Rack Railway.—The Swiss Locomotive & Machine Works has completed three tank locomotives for working the metre-gauge Nilgiri line of the Southern Railway of India. Two more are being built. This line includes a long rack section (Abt system). The wheel arrangement is 0-12-2; four axles are for adhesion and two for rack operation. Locomotives of this type in service on this line were built by the same company.

Road Accidents in March.—Casualties on the roads of Great Britain in March totalled 13,977. This figure includes 336 killed. Compared with March, 1951, which included Easter, this is a decrease of 2,465 in the total and of 68 in those killed. The number of children killed and injured was 2,897, 414 below the total for March, 1951. There was a marked decline in the totals for all classes of road users except pedal cyclists. Pedestrian casualties decreased from a total of 5,010 to 4,131.

British Products at Overseas Exhibitions.—For the last three years G. A. Harvey & Co. (London) Ltd. has taken display space at the Brussels International Trade Fair. On May 9 this year the company's stand was visited by the British Ambassador to Belgium, Sir Christopher Warner, accompanied by the Secretary for Overseas Trade, the Rt. Hon. Henry Hopkinson. Both these visitors expressed great interest in the arrangement of the stand, and in the company's endeavours to promote trade in the Benelux countries. Dollar exports absorb the major proportion of the company's drive and again this year a complete range of steel office and factory equipment will be displayed at the Canadian International Trade Fair at Toronto.

Westinghouse Products at Mechanical Handling Exhibition.—Two of the items of pneumatic equipment demonstrated by the Westinghouse Brake & Signal Co. Ltd. at the Mechanical Handling Exhibition, Olympia, will be working exhibits of the Westinghouse Model "10" retarder and also the Model "10" Skotch Block, both of which are extensively used for controlling the larger tubs and mine cars. Combined with this a non-working exhibit of a pneumatic ram which forms part of the Westinghouse system of pneumatic decking will be shown. A three-phase electric compressor will supply air to the retarder and Skotch Blocks previously mentioned. This compressor will operate off a single-phase supply through a Westinghouse

OFFICIAL NOTICES

The engagement of persons answering Situations Vacant advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-59 inclusive unless he or she, or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

CHIEF MECHANICAL DESIGN ENGINEER required by Company manufacturing diesel electric locomotives. Applicants should be fully qualified Mechanical Engineers, with wide traction experience and a sound knowledge of the design and manufacture of electric or diesel electric locomotives. A high salary will be paid, commensurate with the responsibility of the post, and a generous Staff Assurance Scheme is in operation. A three year contract will be offered to the successful candidate. Applications, which will be treated in strictest confidence and should give full details of qualifications and previous experience, should be sent to—BOX 494, *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

REQUIRED for the Southern Railway of Peru. Locomotive, Carriage and Wagon Senior Draughtsman 30/35 years of age. Qualifications: Must have served a full general apprenticeship in an Engineering workshop (preferably Railway) and have had at least five years' drawing office experience with some time in an executive capacity. A knowledge of Spanish an advantage. Future prospects. Apply to the Secretary, PERUVIAN CORPORATION LIMITED, 144, Leadenhall Street, London, E.C.3.

JUNIOR TRAFFIC OFFICIAL with Railway Traffic apprenticeship experience required for the Southern Railway of Peru, age 20/25 years, single, knowledge of Spanish would be an advantage. Apply to the SECRETARY OF THE PERUVIAN CORPORATION LIMITED, 144, Leadenhall Street, London, E.C.3.

CROWN AGENTS FOR THE COLONIES

PRODUCTION ENGINEER required by the Nigerian Government Railways for one tour of 18 to 24 months. Consolidated salary including temporary increase £1,650 a year. Outfit allowance £60. Free passages for the officer and wife and assistance towards the cost of children's passages or their maintenance in this country. Liberal leave on full salary. Candidates must have had considerable experience in production progressing and planning in a large works and should be capable of organizing production in relation to output of Railway workshops. Apply at once by letter, stating age, full names in block letters, and full particulars of qualifications and experience, and mentioning this paper to the—CROWN AGENTS FOR THE COLONIES, 4, Millbank, London, S.W.1, quoting on letter M.28158.A. The Crown Agents cannot undertake to acknowledge all applications and will communicate only with applicants selected for further consideration.

SUDAN GOVERNMENT

SUDAN RAILWAYS require one LOCOMOTIVE FOREMAN, aged 25 to 38, for service in the Sudan. Candidates must be of good general education and should have served a full apprenticeship as a fitter in a railway loco. works and have had some running shed experience. Appointment will be on probation for Short Term Contract (with bonus) up to five years. Salary ranges from £E.750 to £E.1,400. Starting rate up to £E.1,050 according to age, qualifications and experience. A cost of living allowance may also be payable. No income tax is at present payable in the Sudan. Outfit Allowance of £E.50 is payable when the contract is signed. Further information and application form will be sent on receipt of a postcard only addressed to the SUDAN AGENT IN LONDON Wellington House, Buckingham Gate, London, S.W.1, quoting "Locomotive Foreman 1907" and name and address in BLOCK LETTERS.

RAILWAY ENGINEERING ABSTRACTS. A monthly review of leading world publications on Civil, Mechanical and Electrical Engineering applied to Railways, prepared by the Institution of Civil Engineers in association with the Railway & London Transport Executives. Copies obtainable from the Institution of Civil Engineers, Great George Street, S.W.1. Annual Subscription 35*s*., Single copies 3*s*. 6*d*.

GLOSSARY OF WOOD. A technical dictionary for all associated with timber and its uses. Ten thousand terms about timber—the common and the little known, the old and the new. Ten thousand definitions covering the entire field of timber and its uses—growth, marketing, utilisation. The commercial timbers, their qualities and uses, tools and woodworking equipment, are all here explained simply, concisely and accurately. Illustrated by many clear line drawings. Price 21*s*. net. By post 21*s*. 9*d*. Tothill Press Limited, 33, Tothill Street, London, S.W.1.

INTERNATIONAL RAILWAY ASSOCIATIONS. Notes on the work of the various associations concerned with International traffic, principally on the European Continent. 2*s*. By post 2*s*. 2*d*. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

BOUND VOLUMES.—We can arrange for readers' copies to be bound in full cloth at a charge of 25*s*. per volume, post free. Send your copies to the SUBSCRIPTION DEPARTMENT, Tothill Press Limited, 33, Tothill Street, London, S.W.1.

JUST PUBLISHED.—Twenty-Five Years of the North Eastern Railway, 1898-1922. By R. Bell, C.B.E., Assistant General Manager, N.E.R. and L.N.E.R. Companies, 1922-1943. Full cloth. Cr. 8vo. 87 pages. 10*s*. 6*d*.—*The Railway Gazette*, 33, Tothill Street, London, S.W.1.

static phase converter, which enables standard three-phase equipment to be used in single-phase areas. Among other exhibits on the electrical section of the stand will be a new Westlyte combined control panel and illuminated diagram, in which plastic piped lighting in the diagram indicates the various routes which have been set up by the operation of thumb switches on the panel.

Belgian National Railways Deficit.—The Belgian National Railways deficit for 1951 amounts to 139,000,000 Belgian francs, bringing the total accumulative deficit to 929·9 million francs. It is estimated that the loss in 1952 will amount to 583,000,000 francs. This year the Belgian Government subsidy will amount to 750,000,000 francs, compared with 1,100 million in 1951.

Fork Lift Trucks at Olympia.—Petrol, diesel and battery fork lift trucks will be shown by Conveyancer Fork Lift Trucks Limited at the Mechanical Handling Exhibition at Olympia from June 4-14. Among them will be the Model 6-20 with fully automatic fluid drive. A wide range of materials handling appliances suitable for attachment to the trucks in place of the normal forks will also be exhibited.

Preservation of Two London Tramcars.—The London Transport collection of historic vehicles housed at Reigate has now been augmented by two tramcars, one an "E.1" type built for the London County Council in 1908, and the other a four-wheel car, built in 1910 for West Ham Corporation. The collection already includes a Shillibeer horse bus of 1829, early "knifeboard" and "garden-seat" horse buses, and one of the famous "Ole Bill" motorbuses.

Clyde Coast Summer Sailings.—On May 19 the British Railways programme of Clyde Coast steamer services for the summer season came into operation. Services on all sections have been augmented. Among new residential services are sailings from Dunoon at 8.5 a.m. *via* Kilcreggan (8.25 a.m.) to Craigendoran (due Glasgow Queen Street 9.37 a.m.) with return at 4 p.m. from Glasgow Queen Street to Craigendoran, for Dunoon; 11 a.m. Gourock to Kilcreggan and Blairmore (9.50 a.m. from Glasgow Central; and 2 p.m. Gourock to Kilcreggan and the Holy Loch (12.50 p.m., or 1.5 p.m. Saturdays only, from Glasgow Central). Sailings to Lochranza (Arran) and Campbeltown will be introduced on May 31 and by mid-June the full programme of excursion sailings on the Firth of Clyde will be in operation. From June 15 Sunday cruises will be given to various destinations from Craigendoran, Dunoon, and Rothesay.

Renaming of Scottish Region Stations.—The following stations in Scotland have been renamed as shown (new name in brackets): Clarkston L.M.S. (Clarkston & Stamperland), Dalmuir L.M.S. (Dalmuir Riverside), Gorgie L.N.E. (Gorgie East), Hillington (Hillington West), and Leith L.M.S. (Leigh North).

Corrosion in Boilers.—The Feedwater Specialists Company is issuing a series of technical publications dealing with the subject of corrosion in boilers, steam lines and so on. The subjects include corrosion inhibitors, water cooling and air-conditioning. A programme of lectures is being arranged, which will be illustrated by slides dealing with water treatment and allied subjects. Secretaries of societies are invited to write to the company for details.

Closing of L.M.R. Goods Depots.—The London Midland Region announces that the following goods depots will be closed on and from June 2, 1952. Alternative arrangements have been made for handling of freight, mineral and coal class traffic: Stoke Bruern (near Towcester), Pantglas (between Afon Wen, and Caernarvon), and Thelwall (between Stockport and Warrington).

North Eastern Region Trailer Pump and Hydrant Drill Finals.—At the North Eastern Region trailer pump and hydrant drill challenge shield finals held at York on May 16 Darlington North Road Locomotive Works won both the trailer pump drill and hydrant drill competitions. Runners-up in the hydrant drill were Selby Motive Power Depot, Wakefield Carriage & Wagon Works, Tyne Dock Motive Power Depot, and Leeds (Copley Hill Oil Gas). Runners-up in the trailer pump drill were York Carriage & Wagon Works. Mr. L. Garside, Chief Fire Officer for York, judged, and other fire officers for York assisted in timekeeping. The shields were awarded by Mr. H. A. Short, Chief Regional Officer. Also present were Messrs. E. W. Arkle, Commercial Superintendent, and F. H. Petty, Motive Power Superintendent, North Eastern Region. Mr. A. Dean, Civil Engineer, North Eastern Region (also Regional Fire Officer) was the Officer-in-Charge.

Alternative Rail and Road Facilities via Huddersfield.—By arrangement with bus companies concerned, rail passengers holding single or return, ordinary or bulk travel, monthly return, furlough or military tickets and travelling *via* Huddersfield to a number of local stations may complete their journey from Huddersfield by road when no convenient forward train service is available. Similarly, passengers may begin their journey by road from any of the specified places to Huddersfield. An omnibus voucher is obtained at the booking office where the road journey is begun.

Opening of Newark Lock.—A large, modern lock at Newark, built by the Docks & Inland Waterways Executive to facilitate the movement of traffic on the Trent Navigation between the Humber and Nottingham area, was opened officially on April 18 by Lady Hill, wife of Sir Reginald Hill, Chairman of the Executive. The dimensions of the new lock are 192 ft. 10 in. long, and 30 ft. 2 in. wide, with a depth of water 8 ft. 6 in. It will be able to pass in one operation a unit of four standard Trent craft, carrying about 500 tons, or a large single craft of 200 to 250 tons capacity, according to the type of cargo. Larger craft, including an increasing number of oil tankers, will be able to extend their operations up to Colwick.

Later, when certain other work has been completed, they will be able to reach Nottingham.

British Automatic Co. Ltd.—The report and accounts for the year ended December 31, 1951, of the British Automatic Co. Ltd. show that net profit was £26,381. The directors recommend a dividend of 7½ per cent., less tax (1½ per cent. more than for 1950). This leaves a balance of £10,631, to which must be added £40,167 balance of profits from 1950, leaving £33,983 to be carried forward to the balance sheet of the British Automatic Co. Ltd. and £16,815 to that of subsidiary companies. Takings from weighing machines were more than double those for 1938, and £13,000 more than for 1950.

Cammell Laird & Co. Ltd.—The report of the directors of Cammell Laird & Co. Ltd. for the year ending December 31, 1951, shows a net profit of £463,550, compared with £465,299 in 1950. After adding £183,148 brought forward from 1950, the total sum at the credit of profit and loss account was £646,698. After deduction of interim dividend at 3 per cent., less tax, on ordinary stock, a balance remained of £590,786, which the directors recommended should be appropriated as follows: payment of a final dividend of 11 per cent., less tax (£205,013); transfer to general reserve (£200,000); amount carried forward (£185,773).

Industrial Section at American Library.—The American Library, at 41, Grosvenor Square, London, W.1., has recently opened an industrial section, which includes American books, periodicals, government documents, and other literature in the fields of technology, engineering, management, trade and agriculture. Books and other material can be borrowed by anyone in Great Britain and, where necessary, will be sent by post. In cases where a book or periodical is not available for loan, photostatic copies of special articles will be provided free of charge. The library is open to the public on Mondays to Fridays from 9 a.m. to 6 p.m. All service is free and enquiries are welcomed. The telephone number is Grosvenor 9000, Extension 447 or 748.

Forthcoming Meetings

May 23 (*Fri.*) to 25 (*Sun.*).—Institute of Traffic Administration. 1952 Annual Conference at the Imperial Hotel, Birmingham.

May 24 (*Sat.*).—Railway Students' Association. Motorcoach tour of West Kent and the Medway Valley, leaving Swanley at about 2.30 p.m.

May 24 (*Sat.*).—Permanent Way Institution, Lincolnshire & Peterborough Sections, at Peterborough, at 2 p.m. Mr. L. P. Parker, Motive Power Superintendent, Eastern Region, will read a paper on locomotives.

May 26 (*Mon.*).—Indian State Railways (India and Pakistan), Annual Reunion, 1952, at the Rembrandt Hotel, Thurloe Place, S.W.7. Tea from 4-6 p.m., followed by the Annual Dinner at 7 for 7.30 p.m.

May 28 (*Wed.*).—Railway Students' Association, at the London School of Economics & Political Science, Houghton Street, W.C.2, at 6 p.m. Annual General Meeting.

Railway Stock Market

Caution has again ruled in stock markets, where the recent reaction in British Funds, which brought 3½ per cent. War Loan back to 77, was the dominating influence. The April trade figures, emphasising the vital need to increase exports, and the fear that wage demands may give a fresh impetus to inflation and open up the prospect of another increase in the bank rate, have affected sentiment. Nevertheless, a higher bank rate is not generally expected; and at the time of writing, there are signs of some improvement of buying interest in markets now the big note issue by the Distillers Company has been made. The latter was for £10,000,000 and was so heavily over-subscribed that total applications amounted to no less than £164,000,000.

E.P.L. is having a restraining influence because buyers, particularly in the industrial sections, are holding off until the Finance Bill has passed into law and the terms of this new tax are settled. The E.P.L. concessions announced by Mr. Butler, although welcomed in the City as a step in the right direction, bring no fundamental changes. It is clear that many companies will have little prospect of paying higher dividends in future unless there is an exceptionally big increase in profits; and indications are that higher profits will be the exception now that the inflationary trends in operation last year have been followed by increasing competition.

When E.P.L. has been passed into law, it is thought in the City that many important new issues are likely to make their appearance, some probably in the form of notes carrying a fixed rate of interest and rights of future conversion into ordinary shares. If there were a rush of issues, as is being predicted in some quarters, money would be diverted on a large scale to these new offers, reducing that available for normal business in markets. In those circumstances, prices in most sections would tend to lose ground.

Foreign rails have been only moderately active, and, where changed, small declines were shown on balance for the week. At the time of writing Antofagasta ordinary and preference have reacted to 12¾ and 56 respectively, with business at 78¾ in the 5 per cent. debentures. Elsewhere, Bolivar Railway "C" debentures marked 47½. Brazil Railway bonds were 5⅝, Paraguay Central 6 per cent. debentures changed hands at 22, and there was again business in Dorada Railway ordinary stock around 57. United of Havana 5 per cent. debentures were 16, while the 4½ per cent. debentures marked 4½, the 5½ per cent. Cuban debentures 5½, and the preference stock changed hands around 1¾.

Manila debentures have been less active, awaiting developments, with the "A" quoted at 80 and the £1 preference shares firmer at 8s. 9d. Leopoldina ordinary and preference have been firm at 11¼ and 28½ respectively; while in other directions, Leopoldina Terminal 5 per cent. debentures at 21 held up well, with the £1 ordinary, which are of course purely a long-term speculation awaiting the further payments from Brazil, again quoted around 9d. Elsewhere, Mexican Central "A" debentures remained firmer at 73½, partly on U.S. buying.

Canadian Pacifics showed minor fluctuations around $63¼, but yield considerations brought in buyers for the 4 per cent. preference, which firmed up to 64½, and the 4 per cent. debentures were 81 xd. San Paulo 10s. shares were again around 13s. 9d. Taltal £5 shares kept at 15s. 9d. and Nitrate Rails shares were 22s. 6d.

Engineering and kindred shares showed minor movements which in most cases did not exceed more than a few pence. It is realised that because of E.P.L. there is little scope for higher dividends, but on the other hand, yields in many cases seem attractive on the basis of unchanged dividends. Guest Keen at 49s. xd. now yield 6 per cent., Vickers at 42s. over 5¼ per cent., and Cammell Laird 5s. shares at 11s. 3d. over 6 per cent. Thornycroft at 50s. yield fully 5¼ per cent. and Babcock & Wilcox at 63s. 6d. 5⅛ per cent., while T. W. Ward (70s. 6d.) also return 5⅛ per cent. on the basis of last year's 20 per cent. dividend.

Shares of road transport companies held steady, the tendency in the market being to await the B.E.T. results, due in a few weeks, and Mr. H. C. Drayton's annual review, which invariably contains important references to the position and outlook.

Among locomotive building and engineering shares, Beyer Peacock were 28s. 9d., at which the yield is 6⅞ per cent. North British Locomotive were 14s. and Hurst Nelson 49s. at Glasgow, while Birmingham Carriage were 32s. 1½d. Gloucester Wagon 10s. shares were 11s. and Vulcan Foundry 23s. 1½d. xd. Wagon Repairs 5s. shares changed hands around 11s. 6d. and Charles Roberts 5s. shares around 20s. 6d.

Traffic Table of Overseas and Foreign Railways

	Railway	Miles open	Week ended	Traffics for week: Total this year	Traffics for week: Inc. or dec. compared with 1949/50	No. of week	Aggregate traffics to date: Total 1950/51	Aggregate traffics to date: Increase or decrease
South & Cen. America	Antofagasta	811	9.5.52	£ 137,110	– £15,160	19	£ 2,909,970	+ £ 885,460
	Costa Rica	281	Mar., 1952	c1,291,442	+ c828,700	39	c11,423,709	+ c2,585,228
	Dorada	70	Mar., 1952	32,729	– 1,506	13	102,429	– 5,679
	Inter. Ctl. Amer.	794	Mar., 1952	$1,168,652	– $35,654	13	$3,669,159	– $83,950
	Paraguay Cent.	274	28.12.51	G289,547	+ G102,688	26	G8,823,911	+ G3,556,978
	Peru Corp.	1,050	Apr., 1952	$8,694,000	+ $968,000	44	$83,332,000	+ $6,935,000
	" (Bolivian Section)	66	Apr., 1952	Bs.16,397,000	+ Bs.361,000	44	Bs.161,744,000	+ Bs.35,241,000
	Salvador	100	Feb., 1952	c170,000	– c74,000	35	c1,382,000	+ c55,000
	Taltal	147	Apr., 1952	$2,267,000	+ $342,000	44	$22,160,000	+ $5,547,000
Canada	Canadian National†	23,473	Mar., 1952	19,412,000	+ 1,858,000	13	53,914,000	+ 6,274,000
	Canadian Pacific†	17,037	Mar., 1952	12,636,000	+ 1,134,000	13	35,945,000	+ 3,209,000
Various	Barsi Light*	167	Apr., 1952	37,260	– 2,970	4	37,260	– 2,970
	Gold Coast	536	Mar., 1952	321,377	+ 34,061	52	3,475,842	+ 335,178
	Mid. of W. Australia	277	Feb., 1952	54,399	+ 15,228	35	470,357	+ 153,973
	South Africa	13,398	19.4.52	1,884,825	+ 8,362	3	5,360,583	+ 232,459
	Victoria	4,744	Jan., 1952	2,265,953	+ 274,972	30	—	—

* Receipts are calculated at 1s. 6d. to the rupee † Calculated at $3 to £1